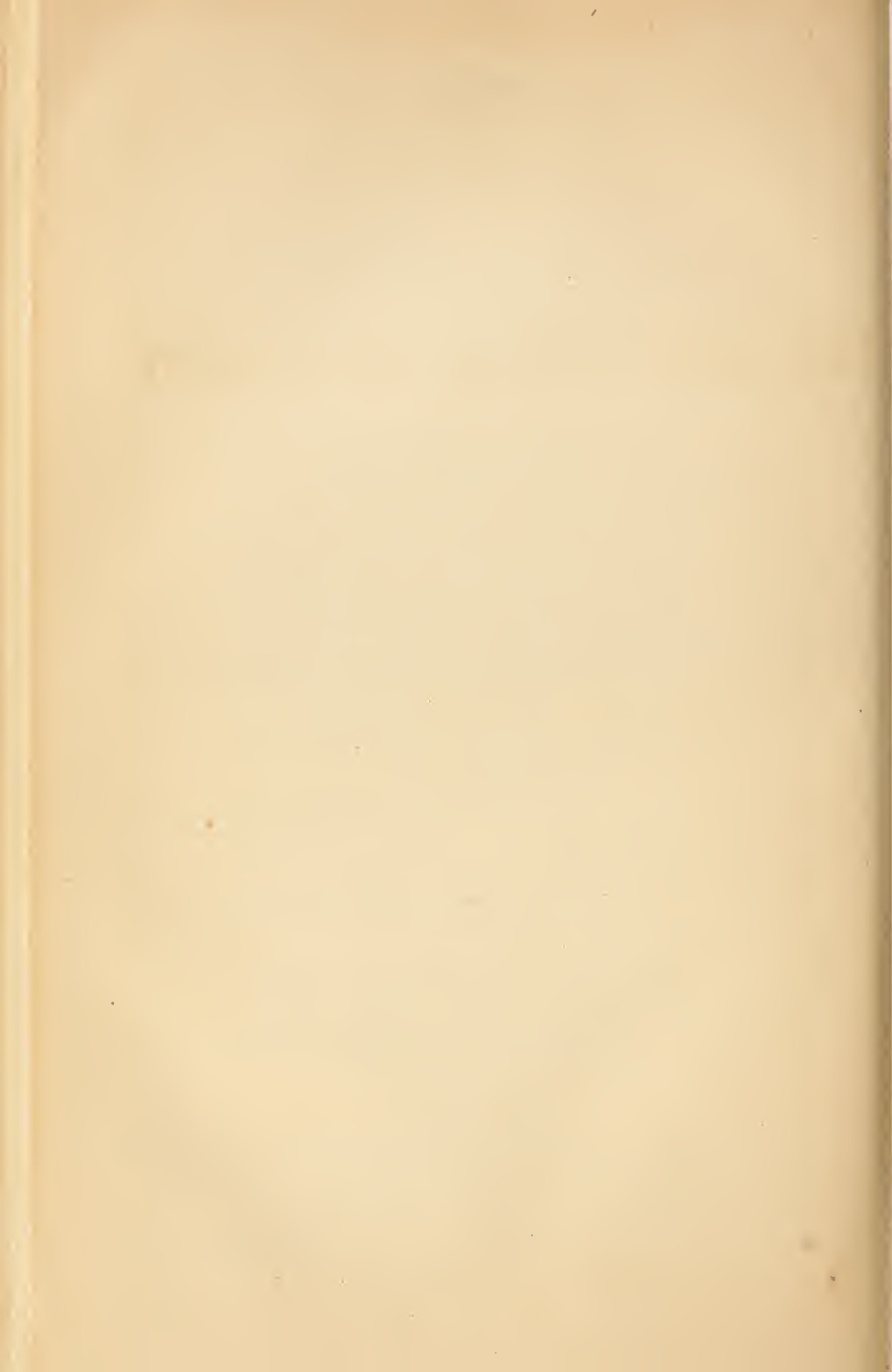


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MONTHLY REPORT

OF

THE AGRICULTURAL DEPARTMENT

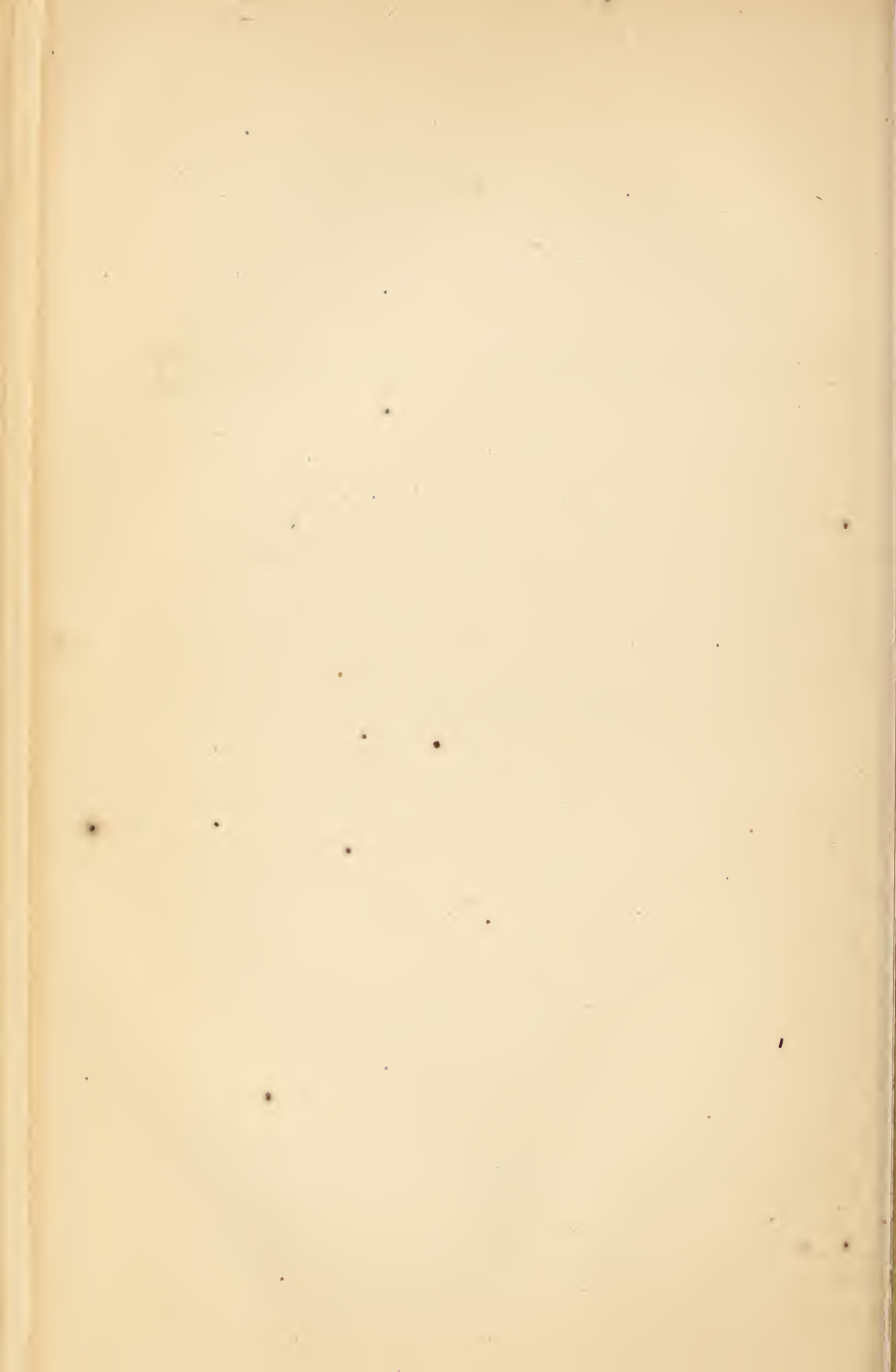
FOR

**OCTOBER,**

1865.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1865.



# MONTHLY REPORT

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DEPARTMENT OF AGRICULTURE,

*Washington, October —, 1865.*

The termination of the civil war has been followed by a restoration of cordial good will. Those lately in arms against the nation here meet that kindness which should unite those of the same national kindred and destiny.

The products of the south again seek their accustomed markets, and, as a result of this renewed commercial intercourse, every effort is now made to resume the cultivation of these products, so that, again, the great prosperity of the south may be not less than in past years. Under these favorable conditions, as Commissioner of Agriculture, I am anxious to be placed in such communication with every county of the south as will enable me to do my official duty in helping the re-establishment of southern prosperity. In aid of this, Congress at its last session doubled the appropriation for the purchase of seeds, in expectation that the south would share in their distribution. These will form a general collection of garden, field, and flower seeds; and such as it is thought will be adapted to southern latitudes will be sent to all parts of this portion of our country.

A part of the operations of this department is the propagation of plants and the raising of seeds for distribution. The operations of the propagating garden have been so much advanced that sufficient quantities of grape-vines, strawberry plants, &c., are now grown to enable the department to introduce these into almost every southern county, and the success of the new experimental garden is such that many useful plants have been tested, and seeds of new varieties produced, most of which, it is thought, will prove beneficial to the southern farmer.

This department seeks to obtain an early account of the appearance of insects injurious to the crops, and the localities where these most abound. The great importance of shielding the growing cotton from its insect enemies is seen by all, and as the entomologist of the department is familiar with the enemies of the cotton plant from a personal residence in the south, it is believed that the department can succeed in effecting a check to their depredations. Besides the enemies of this plant, the south is much annoyed by those peculiar to the wheat and other grains, and hence there is no section of the Union more interested in receiving this aid of the department.

In its statistical operations it aims to give an estimate of each crop grown before it is sold by the producer, sufficiently near the actual yield, to aid in fixing those prices which the amount of the crop and the demand for it require. Speculation or sales not based on these is incorrect in principle, and generally most unjust to the producer or consumer, often to both; and hence no greater

benefit to both could be conferred than the accomplishment of this duty by the department.

To effect all these objects, the Commissioner desires to be placed in communication with persons in each county whose knowledge of its agriculture and whose zeal for its advancement can be relied upon, that he may send to them whatever he has to distribute, and receive such information as may, from time to time, be desired by the department, or which may be deemed useful to it by such persons.

In this monthly report will be found two letters from the entomologist of the department, Mr. Glover, who, through my direction, attended the exhibition of insects, in Paris, France, at the Industrial Exhibition of that nation. His letters will be found very interesting. The first gives details of his journey to Paris and of the insect exhibition; the second, of the animal part of the Garden of Acclimation. In this garden plants are also acclimated, and the American reader will see how great expense the government of France incurs in this aid to agriculture. How little, indeed, has our own government sought to accomplish for it in comparison.

In connexion with these letters, it is gratifying both to this department and to its entomologist, Mr. Glover, to learn that he has received the gold medal of honor, conferred upon him and this department, for a work on the insects of America, upon which Mr. Glover has for several years been engaged. This work, a portion of which he exhibited in Paris, has received much favorable notice from Parisian and English journals.

"It is composed," says the *Cosmos* of Paris, "of 130 plates, colored and designed by the author, and each containing from fifteen to twenty insects, peculiar to the United States.

"Mr. Glover has annexed to his work an index arranged by the names of plants. If, for example, the reader searches for the article *vine*, he finds, in answer, an enumeration of all those insects which destroy it. The numbers themselves refer to the plates and to the explanatory text, allowing one speedily to gather all the information relative to the peculiarities and habits of these insects, together with the manner of exterminating them.

"About twenty plates, in addition, are devoted to the cotton plant, a product of so great importance to the planters and the United States that it, in every respect, deserves their full and special notice."

The mission of Mr. Glover has more fully made known the character of this department in Europe, and it cannot but be gratifying to every American agriculturist to find that both his mission and the Department have received the warmest commendations of European journals.

In this report will be found the tables showing the amount, in bushels and tons, of the summer harvested crops—of wheat, rye, barley, oats and hay. It is gratifying to find that the threshing of the wheat has shown that the injuries from wet weather were overestimated. In the report for August, the returns of the wheat crop showed that in *quantity* and *quality* there was a deficit of 26,241,698 bushels, but the estimates now made, which are final, exhibit the decrease under last year's crop in *quantity* to be 12,172,994 bushels.

Of the first four crops above named there has been produced in 1863, 1864, and 1865, the following number of bushels: 1863, 385,355,584 bushels; 1864, 367,891, 040 bushels; 1865, 404,710,315 bushels. The increase in the oat crop in 1865 is nearly fifty millions of bushels, and of the hay crop more than five millions of tons. The tables exhibit the fall crops as most abundant; that of corn is all that could be desired; it will be the largest ever grown in the United States, so that plenty of cereal food will bless the country and the labors of the farmer. The corn crop is equally good in the southern States, and its planting there is so much greater than ordinary, that that section cannot consume but a portion of the amount grown. It can, therefore, devote the next crop season to a greater production of cotton.

ISAAC NEWTON. *Commissioner.*



## CORRESPONDENCE OF THE ENTOMOLOGIST.

[LETTER NO. 1.]

PARIS, FRANCE, August 30, 1865.

SIR: I arrived in Liverpool on the 15th of August, after a very pleasant passage of about fourteen days, and consider myself extremely fortunate in *not* having sailed by the Glasgow, as I had at first intended, if I could have procured my passports and letters in time to have started by Saturday from New York. We passed several of the spars of the burnt steamer when two days out, but supposed they had been washed overboard from some passing vessel during a squall.

From Liverpool I went by rail the same day to London, where I arrived late in the evening. At 6 o'clock the next morning I took the train to New Haven, and thence by steamer I came to Dieppe. I mention here, for the benefit of the American travelling public, that the authorities in Dieppe *demand my passport*, and would not let me pass without showing it. Mr. Tortat, a naturalized American citizen, was treated in the same manner, we alone being selected out of a whole packet-boat load of passengers. We had to get our trunks from the crowded baggage-wagon, open them to the gaze of an admiring but not sympathizing mob of spectators, and go through the usual ceremonies of having them examined in a small, dark room by an official, who, no doubt, was just as wise before looking at them as he was after the farce of reading the description of our personal appearance, height, age, teeth, &c., &c., and comparing our official written photograph with our own humble selves in "*propria persona*." I mention this circumstance merely because there is an erroneous impression in the United States about passports, for in Washington I was informed that it was unnecessary for an American citizen to show or even carry a passport when travelling in Europe, and that it is more a matter of form than of actual necessity. When speaking of this occurrence at Mr. Bigelow's office, (Mr. Bigelow being out of town,) an attaché informed me that such cases as ours occur very seldom, but that all American citizens ought to be provided with passports when travelling in Europe, as they are liable to be stopped and examined whenever an official feels particularly interested in any individual possessing a peculiarly prepossessing appearance, as no doubt he did in my case. Englishmen, dogs and horses, however, require no pass in France, for the Englishman spends so much money in Paris; that the "*Boulogne Anglais*" is a favorite institution with a Parisian swell. The French race-horse—but here I will stop, lest I might allude to the late race, in which John was vanquished and had to give up the honors of the turf to Jean.

On my arrival at Paris I took up my quarters at Hotel Meurice, as I proposed when in Washington, and am now quietly settled here for a few weeks.

When on my flying passage by rail through England, I found the only subject of conversation among the farmers was the prevailing cattle disease now raging in Great Britain. There are many conflicting opinions on the subject of its introduction into Great Britain; the foreign cattle dealers insisting that the disease is not imported from Russia, or elsewhere, but that it is brought on by the cow-keepers and milkmen of the large towns. But the farmers of England are as positive that it *is* an imported disease, and spreading itself from the cattle shipped from the continent, to supply the beef market. This last opinion appears to be the most probable, as there are so many well authenticated cases of imported cattle being in a diseased state when landed in England. It, therefore, would be well to warn the farmers of the United States *not* to import any stock at



present for breeding purposes. I may here remark, also, that sheep are said to be capable of carrying and disseminating the disease to cattle if they have been kept on the same field, although they themselves are not liable to be attacked with the "Rinderpest," as the Germans call the disease. Should any animals, however, be imported to America, they ought to be quarantined until it is certain that they are in perfect health, and free from every condition by which they might spread the disease. Long and loud are the complaints of poor brother John about the cattle disease in England, as without beef the Englishman is almost without the common necessities of life, and will feel much in the same situation as a steamship at sea without boiler or engine, and depending upon small sails alone. It is almost too bad to jest about this serious calamity, but John Bull and roast beef having been such inseparable companions, I don't see how one can exist without the other. I will make all the inquiries I can about this disease, and communicate my information to the department. From what I have already learnt, the disease is, in many respects, very similar to the cattle complaint so prevalent in Florida and Georgia several years ago, when both cattle and deer perished in vast numbers. There the infected cattle frequently died in apparently excellent condition, but their flesh was found to be in an almost putrid state. In Pilatka, where I was then living, even the vultures that fed upon the carcasses were said to be poisoned. This fact, however, I doubt, never having found any dead turkey buzzards lying about, and seeing no diminution, either, in the numbers of this foul bird during the prevalence of this cattle pest. A curious case is lately mentioned in some of the English papers, where a man who was dissecting a deceased animal was accidentally inoculated with the virus, and died, as if in a fit, in a few hours, his body becoming unusually discolored, and putrefying in a very short time. It has been stated, in one particular instance, that the cattle fed in a field where there were two springs of water, one impregnated with carbonic acid, and the other with iron, were not attacked by the disease, although it was very destructive about that particular neighborhood. Iron alone in the water by some persons is said to be an antidote to the disease. These statements being mere newspaper items, I give them only for what they are worth.

The exposition of useful and injurious insects in the Industrial palace is not as large or as general as I expected to find it; but for a first attempt it is highly creditable to the managers. The exposition is held in a very large glass-roofed hall. Beginning our tour of inspection on the left hand, we find arranged on long side tables a variety of books and pamphlets on insects injurious to the crops, on bee culture, silk-worms, &c. Then followed specimens of the *Pyrethrum roseum*, and *Pyrethrum reigidium*, growing in flower-pots, and all the various powders and preparations made from these plants. These are sold by our druggists under the name of "Persian insect powder," "Lyon's powder, &c." *Pyrethrum reigidium* I did not recognize, and shall endeavor to procure seeds in order to try it in our department gardens, that I may prove if it is such a certain death to insects as the vendors of this powder profess it to be. The dust or powdered particles of the flower is blown upon the insects by means of variously constructed bellows, and other machines, samples of which form a part of this exhibition. There are also exhibited fly-paper for poisoning flies; instruments for the destruction of insects, such as circular stiff brushes for brushing bark lice, &c., from branches of fruit trees; scrapers for the bark, &c. We then come to some very large specimens of wood injured by larvæ of wood and bark eating insects, such as *hylesinus*, *scolytus*, and *cassus*; also branches and leaves eaten by the *tortrix*, and other leaf-eating insects. Mr. B. Gehin exhibits notes on insects, and twenty-two small glass-covered boxes, containing specimens of the roots, wood, or leaf attacked with the insects causing the injury. Mr. Macquerey has a very fine collection of thirteen large glass-covered cases containing European

destructive insects with the wood, roots, branches, or leaf attacked, and a short description of the injury, &c., legibly written on one side thus :

[Insect,]	
[Name of,]	[Description of habits, &c.]
[Wood,]	

This plan is most excellent, and should be adopted in every state agricultural collection, as it would then disseminate the knowledge of agricultural entomology, more than anything else I can think of, and at the same time cost very little money.

Mr. Dillon shows six cases or boxes of insects, leaves, &c., much upon the same plan. We then come to more large specimens of wood, from the museum of natural history, destroyed by insects, and specimens of grain, skins, and vegetables in the same state; large galls, or swellings, produced by the *Maxylus mali*, or "*Puceron lanigere*," on the apple wood; nests of various wood-eating ants, such as *Formica fusca* and others; nests of caterpillars, cocoons of *Lafhyrus piceæ*, or pine saw fly, and larvæ of the *Galleria cerealella*, or hive wax moth. Large pillars of wood, registers or documents of Rochelle, eaten and destroyed by the *Termes lucifugum*, a species of white ant, also were exhibited, and are very interesting as showing the destructive powers of these small and apparently insignificant insects.

At the end of the hall are exhibited specimens of edible crabs and lobsters, among which a mammoth specimen of our American lobster figures conspicuously. Why these crustaceæ are put among the real insects I cannot imagine, and must own that to me they appear somewhat out of place in a purely entomological collection. A gaudy landscape, composed principally of splendid metallic colored beetles, deserves a passing notice, merely for the patience and industry of the artist who has thus wasted his time and hundreds of good specimens. Bee-hives of wood and straw, covers for hives, with all the apparatus for making straw hives, fill up the rest of the space at the end of the hall. The best hive in the exhibition is a wooden hive, made by M. E. Thierry Meig, having parallel square frames on which the bees form their comb, fitting a ledge inside. These frames, with comb and honey, can be withdrawn at will without disturbing the rest of the hive. But as I have seen many in the United States upon the same plan, I will not waste time and paper in describing it more fully. All I can say is that I was very much disappointed with the display of hives, and should there be another entomological and apicultural exhibition here, I think an American bee culturist would do well to send over some of the best patent hives in order to show what Yankee ingenuity can accomplish. The right-hand side of the hall is also filled up with more hives, feeding troughs, fumigators, gauze-wire face protectors or helmets, leather gauntlets, scrapers, and a species of puff ball "*Lycoperdon*," (the smoke of which is used to stupefy the bees when taking out the honey,) sweetmeats, bonbons, gingerbread, hydromel, and other solid and liquid preparations made from honey, liquid wax for painting, specimens of wax candles, Italian and common bees, in glass hives, and all such things as appertain to apiculture or the culture of bees in general.

The centre of the room is mostly devoted to the silk culture. Here may be seen specimens of eggs, worms, cocoons, moths, and silk of all varieties; the ailanthus silk-worm in all the different stages of its existence—depositing its eggs, feeding as the caterpillar on the leaves of the ailanthus, spinning its cocoon among the foliage, or fluttering by hundreds in large gauze-covered frame boxes. Among the various silk-producing insects I observe, particularly, some fine specimens of *B. pernyi* and *Yama mai*; also *Attacus helena* and plats, from New Holland, both of which bear a considerable family resemblance to our native

*Attacus polyphemus*, but are of a much lighter buff color. Among this crowd of strange moths I was very much pleased to recognize two old American acquaintances I had often met with in the woods and fields of Maryland, namely, *Attacus cecropia* and *polyphemus*. I must do them the justice to say that they appeared as well, and perhaps will, in the end, prove quite as useful as any of their foreign, and therefore more highly prized brethren. On another table was exhibited a nest of processionary caterpillars from Madagascar, in a large silken envelope, resembling the specimen in our museum from Panama, but the envelope appeared to be of a much lighter and looser texture, and the silk much more flossy and tender. Some of the common silk-worms, preserved in alcohol or in some other preparation, were of a most gigantic size, perhaps owing to being swollen with the liquid. A very large case containing specimens of cocoons of common silk-worms destroyed by the silk-worm disease is most interesting. This case is exhibited by Eugene Broche and son, and is labelled "price 5,000 francs." Some of the cocoons measure at least two inches in length, and many of them are as large as a good-sized pigeon's egg.

Whilst on the subject of the *ailanthus* silk-worm, I ought to have noticed that there is a large specimen of the wood of this much-abused and not fragrant tree in the exposition, to which a label was attached with the following inscription, and, if correct, may turn the tide of popular favor and raise the reputation of the at present much-despised and abominated *ailanthus* :

"Resultats des essais faits au Port de Toulon en 1865, par M. Roul, ingenieur des ponts et chassées, sur la tenacité et la densité du bois d'ailante. Comparativement avec le bois plus forte :

	Tenacité.	Densité.
Ailante 3 exper., Moyenner.....	32.812	0.713
Orme 7 exper., Moyenner.....	24.867	0.604
Chêne 10 exper., Moyenner.....	19.743	0.751',

So that, according to this table, the *ailanthus* ranks No. 1 in tenacity and No. 2 in density; elm ranks No. 2 in tenacity and No. 3 in density; oak ranks No. 3 in tenacity and No. 1 in density.

I have heard it repeatedly stated by persons who ought to know, that the wood of the *ailanthus* makes very good fuel, and when burning gives out no unpleasant smell whatsoever. This, however, I cannot substantiate from any experience of my own.

I am afraid that my long and uninteresting description of the exposition will have already completely wearied you, but I have been thus particular as I was sent especially to visit the exposition of insects, and to report on what I had seen there. The idea of such an exposition was excellent, and had it been carried out more fully would have been invaluable to the farmer as a means of identifying *all* his insect foes. To be really useful, however, such an exhibition ought to be *permanent* in some *public building*, and *free* to the public. It should likewise be duplicated for various States and climates, and form a perfect object library of reference for farmers desiring information on the subject of entomology as applied to agriculture. In our country there would be no occasion to have a large, general, and expensive collection of all sorts of insects, but merely such as are really injurious or beneficial, and with reference to Dr. Harris's and Dr. Fitch's valuable works.

In my next letter I hope to give you some information about the Garden of Acclimatation, and furnish more notes on insects. By the post I forward two papers, "*Galignani's Messenger*" and "*Cosmos*," in which you will find notices of the exposition. The French article is very flattering to our department.

TOWNEND GLOVER.

HON. ISAAC NEWTON,

*Commissioner of Agriculture.*



[LETTER No. 2.]

PARIS, FRANCE, *September 16, 1865.*

DEAR SIR: As the exposition of insects has been prolonged until the 18th of September, I am obliged, much against my inclination, to remain until it closes; and then intend, as soon as possible, to proceed to England, where I hope to arrange with Mr. Frazer about the type specimens of fowls, &c., and to do whatever I can for the department in the way of exchanging and procuring specimens and correspondents. I am afraid that I cannot do as much for our museum as I had hoped in Paris; Mr. Descaigne, of the Jardin des Plantes, (as I stated in my former letter,) appearing to be very much dissatisfied with the Department of Agriculture, owing to the fact that he has not received any return for the seeds, &c., which he sent some time ago. I hope, therefore, you will not forget the cuttings or rooted plants of all our native grapes, which he desires to try in the gardens.

I have just returned from the Gardens of Acclimation, where I was very much pleased with the beautiful arrangements of the grounds, as well as with the specimens of animals, birds, &c., therein exhibited, each species of animal having a separate paddock of splendid green turfy grass enclosed in a woven wire fence, with a rustic house for shelter, and copiously furnished with water from a running stream or underground pipes; they all appeared to be in excellent health, and, as far as "creature comforts" go, much better off than in the wild state. I must here, however, say that, having no one to accompany me on my tour of inspection and explain, many mistakes will occur in my description, especially as I had merely the guide-book and sundry labels attached to each enclosure to instruct me as to their names. Moreover, some of these enclosures contained several species (of the geese especially) and as many labels; of course I had to guess at the names from recollection of the birds alone.

In the stables a pair of the auerochs, or bison of Europe, first attracted my attention. These animals were lately presented to the Society by the Emperor of Russia, and are very valuable, not only from their extreme rarity, but also as being the only living representatives in France of the true wild bison family, a species now extinct, excepting in Lithuanian forests, where the Emperor of Russia carefully preserves a large herd. The animals in the Jardin d'Acclimation are not large, and to the unsophisticated eye of an American look very much like our wild bison, or, as it is generally but wrongly called, buffalo. Their color is brown or blackish, and the hair on the head and shoulders is rough and shaggy. The real buffalo (*Bos bubalus*) is an entirely different animal, which was originally introduced from the East Indies, but is now domesticated in Italy and elsewhere. This animal is almost semi-aquatic in its habits, and delights to wallow in the swamps and muddy places; it swims well, and is exceedingly fond of being in the water, frequently submerging itself so completely that merely the nose and part of the head appears above the surface. The yak, (*Bos grunniens*), the grunting ox, or, as the French term it, "*bœuf de queue de cheval*," horse-tailed ox, is originally from the cold regions of Asia and the Himalaya mountains. There are several specimens in the gardens of acclimation and the garden of plants; in the latter place, especially, may be seen a most magnificent white bull. These animals are covered with a very long shaggy coating of hair which reaches almost to the ground, so that, when seen from a distance, they look like a large pile of long hair with a bull's head attached to one end and a very hairy horse's tail to the other. The wonder of the spectator is increased when, instead of lowing like our common cattle, this nondescript shapeless mass of long hair lifts up its head on high and gives forth a succession of grunts exactly like the noise made by a gigantic hog. The Tartars use this animal as a

beast of burden, and here in France it appears to be entirely domesticated. Crosses have been obtained between the yak and the common cow, and this cross is said likewise to be prolific. The zebu or lumped-back cattle of India have likewise been acclimated in these gardens. They are really beautiful animals, and no wonder the Hindoos reverence them. Their mild, placid looks, large intelligent eye, sleek condition, and glossy, short, satiny coat form a striking contrast with either the yak or buffalo. The one appears like the well-fed sleek citizen of the ox tribe, whilst the others may be compared to western trappers, who have to rough it and fight their own way through the world. Dr. Davis, of South Carolina, several years ago had several of these Bramin cattle, and assured me that he found them much better adapted to the intense heat of the south than the common stock; he also claimed for them good milking qualities, and said that, as working cattle, they could not be excelled, their ordinary walking pace being nearly as fast as that of a horse. As I have also seen very fine specimens of this breed in Demerara, I have no doubt but that they would succeed very well in the warm climates of Georgia, Florida, and Louisiana. The zebu is reported to have been crossed with the yak; if so, no doubt it would succeed with our common cattle. Among the sheep and goats in the Garden of Acclimation are several varieties of merinos, and the ong-ti or ti-ang, Chinese sheep, which are celebrated for their prolific qualities, although I believe they have not answered the expectation of our American farmers after two or three generations. I was particularly struck with the singular appearance of the sheep of Yemen, the color of the body and legs being of a pure white, whilst the whole head and part of the neck were of an intense black, giving the animal the appearance of a hornless, white, fat-rumped sheep, which had accidentally slipped when drinking out of a bucket of ink and blackened its head and neck. These sheep have no wool, however, but only a kind of nap or short hair. For use, most probably, they would be no improvement on our most common kinds, but would be extremely ornamental on a lawn or in a small park. In a paddock with the Vicuna was a very fine flock of what I, in my ignorance, took to be goats; but, as the label attached to the enclosure said "Le mouton sans lain dit morvan," moutons or sheep I suppose they must be, although I very much doubt the fact, as they had the long silky hair of the Angora or Cashmere, goat-like horns and beard, and, moreover, gave out a most goat-like odor, which diffused itself throughout the surrounding atmosphere. These animals were very pretty, of a white color, and resembled the breeds of Dr. Davis and Judge Peters, of Atlanta. In the description of the Angora goat given in the catalogue of the society I find it stated that at the last exposition of agricultural products magnificent tissues were exhibited by M. Davin which had been manufactured from these fleeces, so that we may yet hope for success in the United States.

Among the horse tribe exhibited the zebra holds the most conspicuous place, on account of its beauty, the whole skin being regularly striped or barred with black lines on a cream-colored ground; but at the same time the heavy head detracts very much from the general air of grace and lightness which the other parts of the animal possess. The dauw, or Burchell's zebra, is merely striped on the head, neck, and fore part of the body. They have bred and reproduced to the third generation at the Museum of Natural History, and, moreover, are said to be very tractable. The hermione or wild ass of Tartary, (*Equus hermionus*,) when in its wild state, is said to be one of the swiftest animals known. These animals are now acclimated, and breed perfectly well in a state of semi-domestication. They have been successfully crossed with the common donkey. From its reputed swiftness, perhaps it might be advantageous to cross it with our common horse, in order to produce an extra swift race of

mules. Should the mule-race\* ever come in fashion, and the Frenchmen take advantage of this cross, they might produce even a mule Gladiator to pluck the laurels a third time from John Bull's brow, although it is true John might grunt and say that the breed was not pure French, as it *originally* came from Africa. The Hermione resembles a large good-looking fawn-colored donkey, and has nothing particularly attractive in its personal appearance. A Siamese pony in the stables is well made, very small, and of a cream-color, with black mane and tail. The Shetland, in size and color, resembles a good-sized black Newfoundland dog, while the most pigmy pony in the collection is labelled the "island pony;" but where the island is, no person has yet been able to tell me. This pony is really worth seeing, it is so very small, of a black color, and perfectly well formed, as far as I could judge, not being able to go very near it.

I saw no true swine in the collection; the nearest approach to this interesting and useful tribe of animals being the collared peccary, of Texas and South America. These animals have bred several times in confinement, but their size being, however, very small, their tempers rather uncertain, and their tusks unusually sharp, I don't think, as a race of hogs, that they would take with our adopted citizens from the Emerald Isle who frequent the suburbs of Washington and endeavor to make the unpaved streets assume a pastoral appearance by turning out the cattle, goats, and hogs to graze upon the potato peelings and old straw from rejected mattresses which take the place of grass or paving-stones.

The deer I shall pass over without many remarks, as we have enough of them wild in the States, and will merely remark that several of them might be introduced with advantage into the parks of our merchant princes, especially the fallow deer, (*Cervus dama*), which is particularly adapted to this purpose, being exceedingly graceful, tame, and of a variety of colors. The antelopes, gnus, &c., are also very pretty and interesting, but more for ornament than for any real use. So we will at once adjourn to the hennery, or rather fowls, if I may be permitted to coin the word.

The most interesting object to me was the wild cock of Sumatra. He really was a most splendid fellow, and the most game-looking fowl in the whole collection. He resembled our black-breasted red game, the back being red, while the neck and breast were of a rich metallic dark bronze. The tail was somewhat drooping and something pheasant-like, but shorter. This drooping might, however, be accounted for by the fright and agitation he evidently felt at being intruded upon by a stranger who wanted evidently to take his portrait. He was excessively wild, and endeavored constantly to hide himself behind a bush or in his house. The comb is single, very large and red; the wattles are pendant, large, and of a red color, excepting near the lower part of the head, where they are of a most beautiful sulphur-yellow; this gives the bird a most singular and beautiful appearance, the two colors contrasting so strongly with each other and the dark bronze of the neck. The Sonnerat fowl also was so exceedingly wild that I could only catch one glimpse of him before he hid behind his bush. I am therefore unable to give any description, excepting that in my cursory glance he appeared very much like a large reddish bantam without feathered legs, and with a drooping tail. Among the other fowls I particularly observed the Houdan breed. These fowls are medium-sized and of a white and black checkered color, and one of their peculiarities is that they have five toes, three of which are turned forward and the other two backwards. The Creve Cœur blacks are nothing but black top-knots. The La Fleche breed are tolerably large and of a black color. The variety labelled "Andalous" are our

\* At the mule-races of our county and State fairs the prize is always given to the *slowest* mule. No one is allowed to ride his own mule, and hence each rider is interested in getting over the track as quickly as possible. There is no spectacle, at these fairs, so amusing as the mule-race.



black Spanish; the "Race de la campine" resemble our Creoles, but are larger. The Breda breed have feathered feet and legs, and very small or no top-knot; the male has no comb, but large pendant wattles. Of this kind there are four varieties—the white, blue, black, and cuckoo, or mottled. The breed of Padua resembles our spangled top-knot Hamburgs, having the same plume of top-knot feathers on the top of the head. Of these there are five varieties—the fawn color, the gold, silver, white, and spotted. The Holland Padua are nothing but our black fowls with large white top-knot—sometimes called white top-knot Spanish.

The Brahma pootra fowls, which were introduced into France from Assam about 1850, are very large, and have a simple dentated comb of medium size; their colors are white, checkered with black, and their legs and feet are heavily feathered. In the gardens are three varieties, viz: the blue, the common, and "*la variété inverse*." The "*race de Nankin*," or Cochin China, are natives of the warm regions of the interior of China, and were introduced into France in the year 1846. They are splendid fowls, of a very large size, very clumsy in shape and gait, of a buff color, and no tail to speak of; their feet are covered with feathers, and their comb is single and notched. Of these fowls there are four varieties on exhibition, viz: the white, the cuckoo or mottled, the black, (the cock has a large single comb and wattles,) and the buff; this last color being the original color found in China, the other colors having been bred in Europe. The Russian fowl is large, the head and neck of the hens being curiously muffled with feathers of a cinnamon color, while the body is of a lighter color. The Yokohama breed is originally from Japan; the male is distinguished by a long-drooping plume-like tail. The color of this fowl is whiteish, with some red on the wings. The Bruges breed is a game fowl of an iron-gray color, with a short tail. The hens of this breed are celebrated as setters, while the males are said to make splendid fighting birds, and, to use the common expression, are "game to the back-bone." The breed of Dorkings, in my opinion, are the most useful and finest fowls in the whole collection; the hens are such plump, good-natured, motherly looking fowls, not too fussy to fatten, and such as no good farm yard should be without, and are at the same time a living reproach to the gaunt, long-legged, scraggy apologies for poultry we too often see in our farm yards, picking their food from the top of a rail fence or flour barrel, all neck and legs, and good for nothing but a quarter race, or striding over a five-barred gate.

One of the most curious fowls in the collection is the Wallikiki, (*Gallus ecundatus*), from Turkey or Persia. This fowl has no tail whatever, not even the apology for a tail possessed by his Shanghai brethren, with long, silken feathers falling over the place where the tail ought to be; it has the appearance of an ordinary chicken with its hinder parts suddenly cropped off and shrouded over with long hackle feathers in order to hide the deformity. There are also several very small fowls or bantams in the collection, the most curious of which is the "race negre," (*Gallus morio*), from India. These fowls are covered with a fine silky down instead of feathers, and present the appearance of a half-grown unfledged chicken that has been dipped in the glue-pot and then rolled in swan's down. Their skin is said to be black, but this I could not discover through the thick coating of long silky down which totally envelops the whole of its body, neck and head.

Some of the bantam chickens, (*Gallus banticus*), originally, probably, from India, are remarkably pretty. One of the breeds is of a mottled gray color, like our Dominiques, with fine rose comb and wattles and unfeathered legs. There are two varieties of these, the yellow or buff, and the golden. The white Java bantams are the most graceful and beautifully formed little white bantams in the whole collection. They have a blood-red rose comb and wattles, and no feathers whatever upon their legs and feet. There is also a black variety of

these Java bantams which I did not observe. The Nangasaki bantams, originally from Japan, are of a whitish color, with some black feathers in the tail and wings. The cock had an immense single comb and wattles; the feet are very short, and with head thrown back and almost touching the tail; wings nearly trailing on the ground, and short, important gait; this small bantam was the very impersonification of a very small man with a most exalted opinion of his own merits and of his importance to the world in general.

The pheasants come next in order, as being in a semi-domesticated state; of these, however, I shall merely mention a few of the most interesting. In the first place, the common pheasant, (*Phasianus colchicus*), found in the wild state in the Caucasus and near the Caspian sea, is the most common species in Europe. It is a most beautiful bird, and has for a very long time been kept in a semi-domesticated state in the parks, woods, and pleasure-grounds of wealthy persons, where it breeds almost as well as domesticated fowls. It roosts at night on elevated trees, and, like our domesticated Guinea fowls, loves to wander about the woods and fields. These birds ought, by all means, to be introduced into our ornamental parks and pleasure grounds, being at the same time useful as an article of food, as well as being highly ornamental. There are five varieties here, viz: the common, the ring-necked, ash color, white, and particolored. The ring-necked pheasant is said to be originally from China. The male of the silver pheasant, (*Phasianus nycthemerus*), originally from the north of China, is a most beautiful bird, of a silver white color, with regular slender lace-like black markings on the feathers of the back, while the under parts are of a black color; the long-drooping tail is also silver white, barred with black. This bird is said to be completely domesticated in France, where it is bred and reared with perfect ease. The female is by no means as beautiful as the male, being of a dull reddish color, and of a smaller size. The golden pheasant, (*Phasianus thaumalea pictus*), is one of the most beautiful and *bizarre* birds bred in a state of half-domestication, and is much smaller than either of the pheasants before mentioned. The under part of the male is of a red color; the head is ornamented with a splendid golden yellow crest; the neck is hidden or overhung by a somewhat projecting ruff of feathers of a bright yellow color, striped or barred with black. The wings are of a dull blue, the hind parts of the body are of a golden color, set off with red; and the tail is long and brown, barred with black. The female of this species is also very inconspicuous in color. These birds have bred well in some forests here, and in a state of domestication have produced three varieties, viz: the ordinary golden and red color, the black, and the Isabella, or fawn.

The Euplocomus, (*Gallophasis prelatas*), or blue pheasant, is one of the most splendidly metallic-colored birds here. It was introduced from Siam and Cochin China in 1862. It is of medium size, with crested head, and a back of the most brilliant metallic blue and gold, which, when reflected upon in the sunshine, gives forth almost all the colors of the rainbow. The song-ki, (*Crossoptilon auritum*), is from the mountains of the north of China and Tibet. This is also a most splendid bird; it is the size of a common fowl, of a blackish color, with a whitish tail formed of long hackle or barbed slender feathers. Some of the feathers of the neck are white and elongated so as to form two horn-like appendages, which project on each side of the top of the head, giving this bird a most singular and grotesque appearance.

The Guinea fowls, (*Numida meleagris*), originally from the north of Africa, are represented by four varieties, viz: the common, particolored, lilac, and white. There is also a species with blue cheeks, (*Numida plilorhyncha*), from Egypt and Senegal, of similar color and marking as our common Guinea fowl, but distinguished by the blue color of the cheeks and wattles, and by the much less disagreeable cry which it makes when disturbed or on its wanderings. The crested or helmeted Guinea fowl (*N. tiarata*) from Madagascar is thus named

from the rounded crest on the top of its head, which has been compared to a tiara. Of the common peacock, originally from India, Malabar, Ceylon, &c., there are the common, white, and particolored varieties. The Japanese peacock from India differs from the common species in the blue color and metallic reflections of the neck, whilst the green-necked peafowl, (*Paon speciferus*.) from Cochin China and the Indian Archipelago, is distinguished by the neck being of a green color. Our native American wild turkey is also here, and six varieties of the domesticated kinds, namely: the black, white, gray, particolored, red, and buff or fawn. Our brown-backed turkeys are probably a cross between the common black and our wild turkey, as in the descriptive catalogue of the Garden of Acclimation we find it stated that "the common and wild turkeys cross readily, and that these crosses are much larger and more brilliant in colors than the common tame varieties." "Oviedo was the first to speak of the turkey," and according to some historians the turkey existed in France in 1518 or 1520; according to others, it was first introduced in Spain, whence it was introduced into England in 1524, and it is somewhat strange that no mention is made in this pamphlet of its supposed Mexican origin.

The swans, geese, and ducks next claim attention. Of the swans, there are the red-billed or domestic, the black-billed or wild, and the black swan from New Holland and Van Dieman's Land. This bird is of a jet-black color, with a bright scarlet beak, and as it is a most magnificent and graceful bird, perfectly domesticated, and breeding well in confinement, it would be a most valuable acquisition to the lakes and waters of our large city parks. I am unable to say much about the geese, as one enclosure contained several species together, and I probably should make mistakes in the names, not being ornithologist enough to name varieties I have never either seen or heard of before. However, I recognized our common Canada and white-fronted goose, and the brent, as old American acquaintances, and, as an American republican, was rejoiced to see that they held their heads as high, and were held in almost as much estimation as their foreign sisters. The ruddy headed goose from the Falkland islands, the China goose, said to be very common in Russia, and the Egyptian goose, which is furnished with a small, sharp spur on the bend or elbow of the wing, would, no doubt, prove valuable to our farmers if introduced into America, as they are perfectly domesticated. The male of the upland goose (*Claphaga majellinica*) is a very large and fine bird; but one of the prettiest geese in the collection is the Sandwich Island goose, (*Claphaga sandwichensis*.) which may be more properly classed among the land than the water birds. It was introduced into Europe in 1832. The red-billed tree duck, (*Dendrocygna autumnalis*.) from Guiana and Brazil, appeared to be quite domesticated, and when I saw it was feeding upon the short turf grass in its enclosure in a very goose-like manner. It is a very ornamental bird, the bright red bill and legs forming a striking contrast to the shaded gray and black colors of its plumage. The white-faced tree duck from Brazil, in the same paddock, is also one of the perching ducks, but is of a smaller size, with bluish bill and legs, and instead of the usual quack given by our tame duck, this bird makes a kind of whistling sound. Our common wood or summer duck is also domesticated here. This species of duck ought to be more highly prized by our countrymen than it now is, and most probably it would be were it a foreigner and cost a very large sum of money to import. In these gardens it is as tame as our domestic mallards, and reproduces with as little trouble. The mandarin ducks from the north of China were all in very plain plumage, but, when in full summer dress, the male is said to be the most beautiful bird of the duck tribe. It somewhat resembles our summer duck in size, shape, and color, but is said to be infinitely more beautiful; these ducks were introduced into Holland about 1850, and reproduces very readily in a state of domestication. The Bahama duck (*Anas ajaja bahamensis*) is very easily domesticated, and resembles a small mallard with a painted tail, but the



bright red color on the base of its bill renders it a most beautiful object when seen swimming in the clear waters of its enclosure.

The kangaroos are very interesting, although ungraceful animals, as seen when feeding on the grass. Their gait being very similar to that of a man, with knees and thighs bent at right angles, swinging his body forward by means of a pair of very short crutches; but as this tribe of animals will probably never be of any real utility, although at the present time domesticated, I will pass them over; and before I close this long letter, will merely mention the Dingo, or wild dog of Australia, which commits such ravages among sheep. This dog resembles a medium-sized fawn-colored hound, with pendant ears and a somewhat thick, drooping tail. It is said to have originated from the domestic dogs, and to have become wild.

I enclose a paragraph, cut out of Galignani's Messenger, on the cattle disease, which may be of some use. I send also two papers with notices of the exposition when I last wrote. I hope you received them, and were pleased with the articles. The weather has been exceedingly warm in Paris. The exposition closes in a few days, when I hope to send you *some good news*. I find I have to economize on \$500 for three months, as living at Meurices is very dear, and I had hoped to be in England by the 10th of the month, but, owing to the "extra" or prolonged "session" until the 18th, I have been obliged to remain here, when, had I known I should have to stay so long, I should have taken cheaper lodging.

With the best and kindest wishes for your prosperity, and remembrances to all friends, I remain your obedient servant,

TOWNEND GLOVER.

HON. ISAAC NEWTON,  
*Commissioner of Agriculture.*

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## TOBACCO.

### THE LOUISVILLE CONVENTION OF TOBACCO-GROWERS—COMMENTS ON THEIR RESOLUTIONS.

On the 13th of September a convention of tobacco-growers was held at Louisville, Kentucky. Delegates were present from the States of Eastern and Western Virginia, Indiana, Illinois, Ohio, Missouri, Mississippi, Louisiana, Tennessee, and Georgia.

The most important of its proceedings will be found in the unanimous adoption of the following report of a committee appointed to consider certain resolutions laid before the convention by Colonel E. J. Bradford, the president of the Kentucky Agricultural Society, and president of the convention.

The committee submitted the following report, viz :

Your committee, after mature deliberation, beg leave to offer the following resolutions, as covering, in their views, the objects of this convention :

1. *Resolved*, That in the judgment of this convention the statistics of the tobacco trade show conclusively that an export tax on leaf tobacco of American growth would effectually exclude it from all foreign markets, and of course stop its production, thus delaying this important agricultural interest, and depriving us of some twenty million of dollars annually in the adjustment of our commercial exchanges with the balance of the world.

2. *Resolved*, That an excise tax on leaf tobacco would, in the judgment of this convention, be very detrimental to its culture, as the great burdens that would be imposed on the grower,

speculator, or manufacturer by the governmental machinery of bonded warehouses, assessors, collectors, &c., would in a short time reduce the production of the crop more than an export tax.

3. *Resolved*, That this convention proceed to appoint a committee of three, with a secretary, to meet with a commission appointed by the Secretary of the Treasury of the United States government, to adjust the tax now imposed by the government on manufactured tobacco, so as to protect the interests of all parties, and make its operation as fair and equitable as possible.

Among other resolutions adopted is the following :

4. *Resolved*, That we recommend the formation of State associations in each State producing tobacco, for the purpose of getting information as to the culture, handling, manufacturing, and cost of production ; and that each State forward to the Commissioner of the Department of Agriculture all information, so that a just and permanent tax may be levied on manufactured tobacco.

*Comments.*—There is much embraced in the foregoing resolutions, and they demand some comments from this department. These will be given on the resolutions in the order of their number.

1. The first one asserts that an export tax on leaf tobacco would effectually exclude it from exportation to foreign countries. It is hardly necessary to say that in this view of the effect of even a small tax only, the department entirely concurs. In the January and February bi-monthly report for 1864 the opinions of the Commissioner were placed before the public, with such reference to the statistics of production, both at home and abroad, and of the export trade and the competition it has to encounter, as ought to convince all that a direct export tax, or indirect excise tax, such as will operate on the export trade, would destroy that trade, and thus strike down a production that has obtained a strong hold in so many States, and upholds an export trade of twenty millions of dollars annually.

The last Congress was clearly hostile to a tax on tobacco leaf, either in the character of an export duty or an excise tax. An extraordinary bill introduced for the purpose of levying an excise tax of about 30 cents per pound on the leaf, to repeal all taxes on the manufactured product, and to grant a bonus of twenty-five cents per pound on the manufactured product when exported, met with such disfavor that not the least notice was taken of it. But such bills admonish every tobacco-grower that other considerations than that of revenue enter into propositions of taxation. The time has not yet come when broad and well-recognized principles of taxation can be advantageously discussed, but it will have come as soon as the questions relative to the pacification and restoration of the country shall have been settled. At this time every leading interest must look to itself ; it must be ready to bear its legitimate and equal burden, according as its welfare, consistent with its duty to the government, will permit ; it must be ready, too, to expose what will unnecessarily destroy or impair that welfare. In the question of an export duty on agricultural productions, a grave constitutional question must be discussed. However desirable it might be to levy duties of that kind on certain articles, yet when the Constitution declares that "*no tax or duty shall be laid on articles exported from any State,*" we must certainly be shown something of at least equal authority as this constitutional provision before a power in direct conflict with this provision should be exercised. Mr. Hamilton has said, in the *Federalist*, that "the general power of

taxation is abridged by another clause, which declares that no tax or duty shall be laid on articles exported from any State; *in consequence of which qualification it now only extends to duties on imports.*" And Mr. Story, commenting on the constitutional provision just quoted, says, "*the power is, therefore, wholly taken away to intermeddle with the subject of exports.*"

But while authorities, of strength and directness so great and obvious, may interpose to prevent an export tax on tobacco leaf, let no friend of this interest rest contented under the shield of their protection. Not only should there be committees here, "to meet with a commission appointed by the Secretary of the Treasury of the United States government, to adjust the tax now imposed by the government on manufactured tobacco," but there should be influential men selected to guard against any measure that might sacrifice the production of the leaf for any purpose whatever.

2. The second resolution affirms that, under the operation of an excise tax, the action of assessors, collectors, bonded warehouses, &c., would in a short time reduce the production of the crop.

This view of the operation of such a tax is confirmed by many correspondents of this department since the agitation of such a tax has been commenced. But one grower only of the tobacco leaf has advanced a contrary opinion, and it was not difficult to see that his views might have been influenced by the expectation that, being wealthy, he might *purchase the crops of his poorer neighbors*, who could but ill bear the delay and expenses of the machinery of the law.

On this subject we notice an opinion relative to the decrease in the present crop, expressed by the St. Louis Democrat. It says:

"We cannot believe with Mr. Commissioner Newton, or his correspondents, that the apprehension of a heavy tax on the leaf is the cause of the decreased planting the present year. The activity of the market at high and well-sustained quotations disposes at once of any assigned cause for such apprehensions. The true reason is to be found in the fact that the tobacco-raising sections of the country have not had the opportunity to recommence agricultural operations, while other sections where the product may be called a new culture, are not prepared to give the experiment a very extensive trial."

We have heretofore, from time to time, alluded to the opinions of our correspondents, without giving their declarations. But on page 18 of the January and February report for 1864 we referred to a letter of T. R. Allen, of Allenton, Missouri, and as he is a representative of the declarations of others uniformly expressed, and from Missouri, we may properly again quote him:

"The present high price of tobacco," he said, "it is thought is as much as buyers for exportation can pay—14 cents at St. Louis, the largest tobacco market in the United States. Add to this a tax of twenty cents per pound, and what must the price be to remunerate the producer? Can we afford to grow the article? This is the query now in our minds. For myself, two years ago I commenced, or rather recommenced, after a suspension of twenty years, on a small scale, to grow tobacco. A small scale was necessary at first, because I was not prepared for it. The second year I increased my crop from three to ten acres, relying on the proceeds of these two crops to enable me to prepare to go into it more extensively; and this I have expended for that purpose, building barns, &c. And this is exactly the case with many others. And now the question is, can we safely proceed? If anything near this amount is put on *leaf* tobacco, I apprehend not."

These doubts have constantly prevailed, and with such great necessities for the increase of stock, farmers will not continue in a production that may be jeopardized as often as Congress meets. The present improved demand is more



likely to be a result of an *anticipated* tax, than the absence of fears on the part of the grower that no tax will be levied.

The Democrat speaks from what it sees in Missouri, where the effect of a restored labor and a former production are seen in an increased planting of tobacco. Our table of the *amount planted* for this year shows Missouri has increased  $1\frac{1}{3}$  tenths over 1864. But the same table exhibits Connecticut at  $1\frac{2}{3}$  tenths less, Maryland 2 tenths less, Massachusetts  $1\frac{1}{2}$  tenth less, Kentucky  $2\frac{1}{7}$  tenths less, Illinois 1 tenth less, Indiana nearly as much below, &c. Here are old tobacco-producing States, as Connecticut, well prepared for its production, which, during the war, have largely increased their tobacco product, and which have not had their labor disorganized as in Missouri and Kentucky. Unfavorable weather and a diminished labor have had some influence on this decrease, but the fear of taxation is a leading element in effecting this decreased planting. The convention at Louisville has spoken truly, for the men comprising it, like our correspondents, speak from observation and experience; and we recognize its authority as one "whose behests we are bound to regard." If such men as the president of that convention do not speak with authority, who then does?

The government, the manufacturer and the grower of tobacco, can have but one interest in this question of taxation. A tax that decreases consumption affects all alike injuriously. What the present high taxes on the manufactured article is effecting may be seen from the following remarks of the St. Louis Democrat. It says:

"There is a large falling off, so dealers state, in the sale of manufactured tobacco. In the cities the consumption shows no diminution, and the inference is that in the country the raw material is used. Indeed, the comparatively light orders for smoking and chewing qualities sustain the belief that the natural leaf, without any other than the simplest preparation, is substituted pretty generally in the rural districts. This will hardly decrease the production."

That in the country the tobacco leaf is thus used we well know. So far, then, the tax lessens the business of the manufacturer and the revenues of the government. We are now where Great Britain was at one time in her beer tax. The farmers brewed their own beer, and then the government changed the tax from a beer tax to a malt tax, thus preventing the farmer from making his own beer. Against this there is now a tempest brewing that will effect more than the abolition of the malt tax in Great Britain. Will Congress aim to prevent this home consumption of tobacco leaf unless upon the payment of a tax? The consumption of tobacco may not have decreased in our cities. But why? Obviously because our cities have had a crowded population since the levying of the tobacco taxes, and the state of these cities has been to every extravagance in expenditure. But the next Congress should legislate for a different state of things; for a restoration to labor of this over population of the cities, and that labor living on its own ordinary industry—an industry belonging to peace and not to war—an industry that demands economy and cannot support extravagance. Under such a state of living will not the present taxes rapidly decrease consumption of tobacco, and the end quickly be a "decreased production" of the leaf?

3 and 4. We have already referred to the object of the third resolution; and as to that part of the fourth one which recommends to States growing tobacco to lay before this department all information that is essential to the determination of the extent of taxation tobacco may safely bear, the Commissioner approves its purpose, and is pleased to see so important a convention co-operating with the Department of Agriculture. It is only by such co-operation in every agricultural pursuit that the object of the establishment of this department can be fully effected.

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## THE CATTLE PLAGUE IN GREAT BRITAIN; SHEEP NOW AFFECTED BY IT; ACTION OF THE FRENCH AND ENGLISH GOVERNMENTS, &c.

In the last monthly report the nature of this disease was placed before the reader through the extracts taken from a report on it made in 1857. We have carefully examined the statements published of it by the English papers, and there is a general concurrence in their representations, showing that the nature and fatality of the disease are as stated in our monthly for September. In England the disease is more speedily fatal, attributable, we suppose, to the crowded and confined modes of keeping dairies. But when well kept the disease has been very fatal. A writer, speaking of the herds of Miss Coutts and Lord Granville, says that "they abode in all vaccine luxury and comfort, being of the highly privileged class, yet the disease defied all curative treatment amongst them, although attended by veterinary surgeons."

Interested parties in Great Britain have endeavored to maintain that the rinderpest was not imported into that country, but had a spontaneous origin there from the unhealthy condition of the dairy cows in London, aggravated into this form of disease by the heat and moisture of the season. But the following extract from the report of the French minister of trade and agriculture to the Emperor settles this controversy, and shows our former article to be correct in all essential statements. This extract deserves the careful reading of every farmer; and we add below it the action of the government of Great Britain in excluding from Ireland, which is yet free from the disease, not only the importation of cattle from Great Britain, but of *all parts* of cattle:

### REPORT OF THE FRENCH MINISTER OF AGRICULTURE.

PARIS, September 8—7 a. m.

The *Moniteur* publishes a report from M. Béhic, minister of agriculture and commerce, on the subject of the cattle disease now prevalent in England and the countries of the north of Europe. He states that, as already announced, on the breaking out of the plague he despatched MM. Bouley and Reynal, professors at the veterinary school of Alfort, the former to England and the latter to Germany, to make inquiries into the nature of the malady and the manner in which it may have become introduced into England. He at the same time appointed a commission in France to study all questions relating to the epizootic and the measures to be adopted in case the malady should become menacing for the cattle of France. The result of those inquiries forms the subject of the present report, and may be summed up as follows:

"The disease in question—known in England as the cattle plague, in Germany as the *rinderpest*, and in France as the *typhus contagieux*—is indigenous to the steppes of eastern

Europe, and is never developed spontaneously out of those regions, no matter how unfavorable are the hygienic conditions to which the cattle may be exposed. The plague is, therefore, an exotic malady for western Europe. Its present invasion in England arises from the importation of Russian cattle, embarked at the port of Revel, in the Gulf of England, and landed on the wharfs of the Thames. If, however, the disease is originary of one single country, its contagious properties cause it to be essentially migratory, as is shown by its repeated extension to all the countries of western Europe, and even to England, notwithstanding her isolated situation. In most instances the irruption of the plague from what may be called its native country has been occasioned by the movements of armies from the north, and which have been naturally accompanied by large herds of cattle, required for the food of the soldiers. When, in consequence of scientific researches made in Germany and Russia, the fact was established that the disease is endemic to the steppes of Russian Hungary, the governments of Prussia and Austria were able to take measures to preserve their own provinces, and consequently those of the other countries of western Europe, from the contagion. The result has been that a period of fifty years has passed without the plague having once appeared, while during the last century it showed itself in France almost every twenty years. Those preservative measures were, however, only applicable to the introduction of cattle by land. At the present moment, when the means of communication between different countries have become so rapid and so easy, the chances of the disease crossing or turning the barriers opposed by Germany to its invasion have greatly increased. For example, in the present instance the plague has been introduced into England by the direct importation of cattle from the Russian ports. Thus England, after a lapse of one hundred and twenty years, is again suffering from the plague which caused such devastation in 1745. The malady has now been communicated to Holland by a vessel laden with cattle for Great Britain, and which had returned with her cargo to a port of Holland in consequence of not having been able to land it in England, no doubt in consequence of the diseased state of the animals. In the same manner the plague might have been introduced into France, if the Dutch vessel, being driven from England, had put into one of the Channel ports of France with the hope of disposing of her cargo. There is thus an absolute urgency for forbidding the admission into the ports of the Channel, or of the North Sea, of all vessels laden with cattle, or of subordinating the importation of the cattle to measures of a nature to prevent the invasion of the disease. The same dispositions should also be put into practice on the northern and eastern frontier. The minister then adds that the laws already in vigor are sufficient to combat the plague in the interior of France, but that in the present system of foreign trade the administration has not sufficient power to prevent its introduction by sea or across the frontier."

The report is followed by an imperial decree declaring the importation of cattle into France to present a danger of contagion, and authorizing the minister of agriculture and commerce to determine what ports or portions of the frontier should be closed against the introduction of such animals. The above is also accompanied by an order from the minister absolutely prohibiting the importation of animals of the bovine race, as well as the skins or other fresh portions of cattle, by any seaports between Nantes and Dunkirk, or by the frontier between the sea and the Rhine, and by the other ports of the empire only after inspection. Animals which should be suspected, or should have been in contact with those suffering from disease, M. Béhic orders to be kept isolated under surveillance for ten days. As an exception to those dispositions, the order prohibits in an absolute manner the introduction of cattle, their skins, or other fresh portions, from England, Holland, or Belgium, by any of the ports or the frontier of France.

#### ACTION OF THE ENGLISH PRIVY COUNCIL.

Whereas a contagious or infectious disorder has lately appeared and now prevails among cattle within that part of the United Kingdom called Great Britain, which is generally designated as the "cattle plague;" and whereas it was expedient to take measures for preventing such disorder from extending to that part of the United Kingdom called Ireland; and whereas, for such purpose, an order was duly made, in pursuance of the authority of the said acts, by the lords of her Majesty's most honorable privy council, dated the 25th of August, 1865; and whereas, by such order, the removal to any port or place in that part of the United Kingdom called Ireland, from any port or place in that part of the United Kingdom called Great Britain, of any cow, heifer, bull, bullock, ox, or calf, was prohibited; and whereas it is apprehended that the said disease, termed "cattle plague," may be communicated otherwise than by the removal of the above-named animals:

Now, therefore, the lords of her Majesty's privy council do hereby, in the exercise of the powers given by the said recited act, and by the several acts continuing the same as aforesaid, order as follows: That, after the date of the publication of this order in the London Gazette, it shall not be lawful for any person to remove any skins, hides, horns, hoofs, or other parts of any of the above-named animals from any port or place within that part of the United Kingdom called Great Britain to any port or place within that part of the United Kingdom called Ireland. And the lords of her Majesty's treasury are to give such directions herein as may be necessary to insure due obedience to this order.

ARTHUR HELPS.



## THE PROGRESS OF THE DISEASE IN ENGLAND.

The *Agricultural Gazette* of September 23 makes the following remarks on the present state of the plague :

After a careful consideration of the whole question, we are compelled to admit that the measures which have been in operation since the outbreak of the plague have not resulted in anything satisfactory; the malady has extended in spite of all that has been done to arrest it; and, judging from daily observation, it is steadily advancing yet. People seem to have made up their minds that no care will avail; the disease they think is conveyed by the air, or in some other mysterious manner, and that if their cows are to have it they will, no matter what is done to prevent it. These reckless notions are too prevalent, and, added to the fact that stock owners still persist in viewing all animals as perfectly healthy so long as they show no symptoms of disease, notwithstanding that they have been in contact with infected stock, there is reason to fear that there is no chance of our getting rid of the plague at present.

## ITS INCURABILITY.

The *Mark Lane Express* of the 18th of September says :

At a meeting of the Cattle Compensation Committee held at the Mansion House lately, a letter was read from Mr. Waddington, enclosing a report made by Professor Simonds to the Privy Council. In this report Mr. Simonds says he regards the establishment of sanitoriums on a scale contemplated by the Metropolitan Committee as perfectly impracticable, and he is further of opinion that if they were founded they would be "one of the greatest evils possible to conceive," as tending to perpetuate the contagion. He observes that "nothing can be more fallacious" than the supposition that the plague is a curable disease; and adds, "the experience already gained in this country confirms that of Europe as a whole, viz: whenever the plague breaks from its stronghold in Russia and invades other countries, medical skill is powerless in arresting its progress by curative measures."

## SHEEP DYING OF THE DISEASE AND COMMUNICATING IT TO CATTLE.

In the same paper of September 30 we find the following report on the infection of sheep by this disease. Its importance demands that we should give it entire. Everything relating to a disease so fatal, and which should be expected to be brought into this country by some unfortunate importation, merits enough consideration to give the whole report :

[The following report by Professor Simonds to the clerk of the council, announcing the communicability of the cattle plague to sheep, is by far the most serious publication on this subject during the past week :]

VETERINARY DEPARTMENT,  
23 New Street, London, September 25, 1865.

SIR: I beg to report that, acting on the instructions received from you to investigate without loss of time the statement received at your office relative to an outbreak of the cattle plague in a remote part of the county of Norfolk, supposed to have arisen from cattle having been in contact with some diseased sheep recently brought to the premises, I have visited the district in question and inquired into all the circumstances of the case.

It appears that as far back as the 17th of August Mr. C. Temple, farmer and merchant, of Blakeney, received on his farm one hundred and twenty lambs which he had instructed a dealer to procure for him for feeding purposes. The lambs were bought at Thetford Fair on the preceding day, and were immediately sent by rail to Fakenham, from which place they were driven to Blakeney, a distance of about ten miles. On their arrival they appeared to be fatigued to a greater extent than ordinary, which was, however, attributed to the heat of the weather and the exertion the animals had undergone. In addition to this the shepherd observed that several of them seemed unwell, and he remarked to his master that they did not appear to be a very healthy lot, and that he thought it would be better to return them to the dealer. Within a day or two after this time the symptoms of illness were more marked in all the original cases, and many more of the animals had been attacked. On the 24th two of the worst cases were removed from the field to the farm premises, and were placed in a shed for treatment, in which afterwards a cow was put. On the 25th two of the lambs died, and in consequence of this, and of the large number which were now affected, the whole were brought on the morning of the 27th into the same yard where the shed previously alluded to was situated. There is also another shed, separated from this yard only by some old furze faggots, into which the cows were driven night and morning for being milked. The lambs remained in the yard till the morning of the 28th, when, having had

some medicine administered to them, they were returned to the fold and never came near again to the cows. While in the yard three died, two on the 27th and one on the 28th, and on the following day two others died in the field. From this time the disease went on, so that by Friday last, the 22d of September, the day of my visit, forty-six had either died or been killed, and twenty-seven were in a very precarious condition.

On the 7th of September, ten days after the last exposure to the sheep, a cow gave evidence of being affected with the cattle plague, this animal being the one which had been put into the shed occupied by the diseased sheep on the 21th of August. A second cow was attacked on the 11th of September, and a third shortly afterwards, which was followed by others, so that by the 16th all the cows, six in number, a heifer and a calf, were all dead. My examination of the lambs showed that they were unmistakably the subjects of the plague. The symptoms agreed in almost every particular with those observed in cattle affected with the malady, and the *post mortem* appearances were also identical. With a view to ascertain the true nature of the changes produced in the system prior to death, I had four of the lambs killed, and from these I took some of the diseased parts and forwarded them to the Royal Veterinary College without note or comment. These parts were examined by my colleague, Mr. Varnell, who at once recognized the special changes of structure which are caused by the cattle plague. The whole facts of the case leave not the least doubt of sheep being liable to the disease termed the cattle plague, and that when affected they can easily communicate the malady to the ox tribe; and moreover, that when so conveyed, it proves equally as destructive as when propagated from ox to ox in the ordinary manner. The case is also more important from having occurred in a place no less than fourteen miles distant from any other where the cattle plague exists, thus placing beyond a doubt the fact of the malady being introduced among the cattle by the sheep alone. I regret to add that this is not a solitary case of sheep being affected by the cattle plague. I learned that some sheep were supposed to be similarly affected belonging to Mr. R. F. H. Harvey, M. P., on his estate at Crown Point, near Norwich.

This place I also visited, and found a large flock of upwards of two thousand lambs, among which the malady was prevailing. A large number had been separated from the diseased, and gave no evidence of the malady. Very many, however, had died, and the disease was making rapid progress. I also examined many of the dead, and found the *post mortem* (after death) appearances to be identical with those seen in the other cases spoken of in this report. In this instance the malady was brought into the estate by the purchase of some cattle, which afterwards died from the disease, and which were unfortunately pastured with the sheep at the time the disease manifested itself. The whole matter is one of the greatest importance, and which I lose no time in submitting to you for the information of the Lords of the Council.

I have the honor to be, sir, your most obedient servant,

JAMES B. SIMONDS.

This is indeed "a matter of the greatest importance," not only to Englishmen, but also to Americans. *Let the cattle and sheep growers of this country look well to their situation, and remember the old adage, that an ounce of preventive is worth a pound of cure.* In this malady there is no cure at all. Of the flock of sheep owned by Mr. Harvey, referred to in the above letter, seven hundred had died; how many would escape could not yet be told.

The English government has acted very promptly on this report, and consolidated all its previous orders on the cattle disease, making them apply to all animals, including sheep, lambs, goats, and swine, as well as cattle.

#### THE BEEF AND MILK SUPPLY IN ENGLAND.

The *Agricultural Gazette* says:

Consumers of beef and milk are the victims of a not unreasonable apprehension, either that they will have to do without these commodities altogether, or be content with them as very occasional luxuries. With regard to the meat question there is little doubt but that the supply from abroad will, while the foreign stock remains to a great extent healthy, suffice to prevent famine prices being demanded. The milk question is more serious, not only because the supply is even now very much below the demand, but for the further and more important reason that a great deal of milk from diseased animals is sold and consumed. We have no desire to excite unnecessary alarm, but it is our duty in the interests of the public to protest against the popular fallacy that diseased milk cannot be obtained, because of the secretion being arrested as soon as the animal is attacked. Many animals continue to give milk for some days after the disease has commenced; some never lose the secretion entirely up to the moment of death.

## BREEDING IN AND IN.

The question of breeding in and in has for years been one of much discussion in stock growing, and not less in its application to the human family, so far as it relates to the intermarriage of first cousins. Almost every annual report coming from the benevolent institutions has called public attention to the defects in sight, hearing, or mind of the inmates of these institutions as exhibited in so many persons who were the children of first cousins. Many of these reports have called upon the State legislatures to lessen defects of this nature by prohibiting such marriages.

Under this state of discussion we suppose that a portion of Mr. Klippart's letter to the Commissioner of Agriculture, published in our last report, will receive marked notice. The part we refer to is where he speaks of Mr. Steiger's flock of sheep. He says:

"I was led to visit his estate on account of the sheep, because I had heard of it everywhere as being the most famous stock flock in all Saxony, if not in all Germany. The flock was founded in 1806 by the purchase of the most celebrated ewes from the stock flock of the Prince of Reuss, at Klipphausen, and the flock of the latter traces back to an importation from Spain of the most celebrated flocks there. The present flock at Leutewitz *has been bred in and in for about sixty years*, and has had no infusion or admixture of any other blood. Some of the bucks which I saw weighed, with one year's fleece on, one hundred and fifty pounds, and were almost as large as some of the Rambouillets I saw at Stettin. They were finely built animals, and had splendidly compact heads. The bucks' fleeces unwashed weighed twelve to twenty pounds, and when washed from six to ten pounds; the ewes' fleeces unwashed seven to ten pounds, and when washed four to six pounds. The wool is used in the manufacture of the finest cloths, &c."

We understand that there is now preparing in the Department of War a work or works on the social statistics drawn from an examination of about two millions of men, who came under examination as to their physical qualities during the recent civil war. One fact developed will be, particularly as found to exist in one of our most northern States, the large number of defective physical organizations arising from this breeding in and in through the marriage of first cousins.

The following statement we find in one of our foreign papers, and the reasons there assigned for the facts given show the cause of the difference of opinion which has so long prevailed as to the results of such breeding; some maintaining that no ill consequences are necessarily and inseparably connected with it, and others the reverse.

A French statistician, in prosecuting his examination of this matter, selected forty-six cases of consanguineous marriages among the Jews in the town of Batz, in the French department of the Loire Inférieure:

He examined the husbands, wives, and children, both in regard to their physical and intellectual development, and made inquiries concerning the families examined and their ancestors through the mayor, pastor, and oldest inhabitants. Combining the statistics thus collected, he has found that intermarriages do not bring about disease, idiocy, or malformation. However, it is important to mark *that these results are attributed by the writer to the favorable climate of the locality, and to the general habits, hygiene, and morality of the inhabitants, as well as to the absence of ALL HEREDITARY DISEASE.* The town of Batz is situate upon a peninsula, bounded on one side by the rocks of the sea shore, and on the other by salt marshes. The air is pure, and the most frequent winds are from the north, northeast, and northwest. The number of inhabitants is about 3,300. They have little communication with other



parts of the country, and their occupation is almost confined to the preparation of salt. They are very intelligent, almost all the adults being able to read. The morality is of high stamp, prostitution being unknown. Theft and murder have not occurred within the recollection of the oldest inhabitant. Mothers nurse their children till they are fifteen months old, and the general food of the population is of the vegetable class. There are at present in Batz forty-six consanguineous pairs of first cousins, five unions between second cousins, thirty-one marriages of third cousins, and ten of cousins in the fourth degree. From the five unions of second cousins there have been twenty-three children, none of whom have presented any congenital deformity. Thirty-one marriages of third cousins have produced 120 children, all healthy; and the marriages of fourth cousins have given rise to twenty-nine children, all of whom, with the exception of those who died of ague, were strong and healthy at the period of examination. The writer contends that such facts as the foregoing prove that such sanguineous marriages by no means lead to the degeneration of the race.

It will be seen that this report of the French statistician and the statements made by Mr. Klippart go to show that breeding in and in of itself results in no evil. But the conditions of this result must be always kept in view. *They are freedom from disease, and of the tendency to inheritable diseases.* Animals and mankind, one in flocks or herds, and the other in families, have been swept away, when the breeding has not been in and in, where both parents have been subject to the same disease. Thus, where both parents have inherited that scrofulous taint which ends in consumption, all the children have perished from it, although the parents had no consanguineous relation to each other. Mere consanguinity, therefore, is not the point to be regarded. Like begets like. The inheritable *quality* of the blood is the thing. If a family has an inheritable disease, then that disease being in both parents will increase in a geometrical proportion, and soon result in the destruction of the offspring. But if one parent is healthy, then that health may acquire such an ascendancy over the disease of the unhealthy parent, by reason of its greater vitality, as will not only sustain the average health of the offspring, but may ultimately overcome the tendency to disease which the diseased parent transmits to the blood of the offspring.

The conditions of breeding in and in, then, are safe only when there is perfect health in the whole family, and when the external circumstances, as proper food, exercise, location, &c., all favor a continuation of such health. Where there are physical defects of form or health it is a fatal mode of breeding, for the degeneracy will be doubled in the offspring. It will be 2, 4, 8, 16, and so on, quickly resulting in extermination.

Eminent breeders, having no flocks or herds equal to their own from which to obtain crosses, have been sometimes forced to resort to in and in breeding, but the dangers of it have generally led them to abandon it when they safely could do so.

## OREGON.

The returns received from this State do not indicate favorable harvests. The weather has been very unfavorable—late, killing spring frosts, followed by excessive drought. Our excellent correspondent of Salem, Mr. David Newsom, gives the department the following comparison between the crops of 1865 and 1864 :

	<i>Yield per acre, 1865.</i>	<i>Yield per acre, 1864.</i>
Wheat .....	bushels..18.....	bushels..27
Oats .....	" 20.....	" 40
Barley .....	" 12.....	" 20
Rye .....	" 15.....	" 25
Peas .....	" 30.....	" 60
Buckwheat .....	" 10.....	" 20
Turnips .....	" 40.....	" 80 to 400
Potatoes .....	" 80.....	" 260 to 500
Onions .....	" 50.....	" 225
Parsnips .....	" 25.....	" 200
Carrots .....	" 80.....	" 250
Hay .....	pounds.500 .....	pounds 2,500 to 4,500
Apples ...	bushels.300.....	bushels..100 to 125

In explanation of this table he says :

"I have travelled to some extent in central Oregon this season, and have made extensive inquiries in relation to farming, pastures, fruits, gardens, &c., and the results you have here. I have never seen the drought so destructive. But our sister State, California, has been blessed this year with a most abundant crop of grain, early fruits, good gardens, and pastures. As you are aware, that State suffered almost incalculable losses last year from excessive drought and heat, hence much of its supplies were drawn from Oregon, at exorbitant prices. She is now sending flour, grain, &c., in great abundance to our mines and even to our valley towns, and drawing again from us some of those twenty-dollar gold pieces which were received of her. Prices cannot attain a high rate here this year, as our products will be consumed at home, and cannot bear shipping. A large number of emigrants are near at hand, and others have already arrived from Idaho, Montana, and Salt Lake country. They have found out that mining is but poorly adapted to men of families and who have much stock. It is useless, however, to tell this fact to others before they set out for the land of Ophir. The school of experience teaches many of them a very dear lesson."

But this complaint of abandoning the farm for the mines is a common one in all the Rocky mountain States and Territories, and so long as men are hopeful to acquire sudden wealth by an accidental success it will continue. Still the mines are essential to the markets for agricultural products, and this is seen in the following remarks of the same correspondent :

"There are no placer diggings found in our quartz lands near us; hence the mining will be done, as in cases of iron and lead in other countries, by capitalists, and on a permanent basis. All supplies of provisions and clothing will be furnished from our central counties here to those mines, as a very good wagon road is already made to the Santian mines. A newly discovered bay, oyster bed, and cod fishery have the advantage of being right opposite those mines, and shortens the distance from San Francisco to them over 300 miles. A good wagon road now leads from that bay (Yaquina) to those mines. Search has been made, and a continuation of the same lodes found 60 miles further north, and no doubt need be now entertained but that they extend along the western slope of the Cascade range to 49° north."

The Oregon returns show an increase in butter and cheese, and sheep and wool. The former would have been still greater, had not the drought cut short the pastures. Of these interests the same correspondent remarks :

"The whole extent of Oregon proves to be well adapted for sheep. They are healthy, live well on the natural and tame grasses, and the ewes, generally, have lambs twice a year, often in pairs. One subject I will here touch upon that may seem strange to you. There is no country in the United States where cows are healthier, give more or richer milk, or are easier kept, than in Oregon. Butter is now worth 40 to 50 cents per pound; cheese the same. Yet over one-half of these articles consumed here are imported. The rutabaga, field turnip, and mangel-wurtzel can be raised here at the rate of from 25 to 40 tons per acre. But there is a large class of people so improvident that nothing can stimulate them to exertion, or to any business that requires steady pursuit, scientific skill, or hard work. They are adventurers who have come here from the borders of Missouri, Arkansas, Texas, Iowa, and Illinois, under high excitement, expecting to make large fortunes suddenly. But being disappointed, they give place to others who will come here as permanent settlers. Lands are yet exceedingly low in price. A more favorable chance for good investments in lands could not be desired. Billions of tons of iron ore lie around our buttes and hills unnoticed and unworked, with timber, water-power, and coal, all idle. These lands can be had at from two to ten dollars per acre."

With such calls upon energy and enterprise from the Pacific States, and a like demand for them from the Southern, who, of our young and middle aged men need remain at home in poverty? Our country is all before them.

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## HOW TO USE DISEASED POTATOES.

Although in these reports we aim to avoid all the ordinary topics of the farm, yet sometimes a recommendation or a practical experiment assumes so much of a nationality in its effect that we regard it as our duty to make it generally known by inserting it in our monthly. The following experiment is one of the matters of this kind, for it relates to making useful a crop that so often is destroyed by the rot.

In the *Agricultural Gazette*, of London, a correspondent communicates the following :

"Many years ago I went to reside at Mossley Hill, about three miles from Liverpool, and there I cultivated for my own use about thirty acres of land. I found it advantageous for my horses, cows, and pigs, and poultry to plant ten or twelve acres with potatoes each year. The first year I lost about half my crop by the disease. A neighboring farmer told me that my land was too rich, and that I should have better potatoes if it was poorer. So I got off a nine-acre field a crop of wheat, and carted a large quantity of sand to mix with the soil. But it was in vain. Nearly half the crop was again diseased. But, noticing in 'THE TIMES' a recommendation that, as quickly as possible after the potatoes were dug, those not absolutely decayed should be washed, boiled or steamed, crushed, and salted in layers, I determined to try it, and the next year I planted in the same field nine acres. As soon as the tops began to show blight we commenced getting up, and carefully separated all which exhibited even the slightest tendency to disease. Each day at noon these were taken to the farm-yard, were well washed in a flat and somewhat shallow tub with a birch broom, and then received a second scrubbing in a second vessel. They were then boiled, for I had no steaming apparatus, and laid in one corner of a shed which I had partitioned off, and were then crushed by a wooden beater till they formed a layer three or four inches thick. A sprinkling of salt was then made over the layer, and in the evening the intermediate getting up was similarly treated. So we proceeded until all were got up, and I found that we had a heap of potatoes the size of the partitioned space, nine feet long, five feet wide, and six feet high, and the whole became one mass of potato pulp, with just as much salt as kept it from putrefaction. During the winter and spring we fed with it the carriage horses, cows, pigs, and poultry. They all liked it, and all flourished upon it. We cut it down with a spade. Our milk and butter were unsurpassed, and our hams and bacon could not, I think, be exceeded. Every year the same course was adopted with perfect success, and we cared little for the disease. I am convinced that if all would adopt the course which I did, a very large portion of what are called diseased potatoes would be saved and made useful for cattle and other stock."



## COLORADO.

The following letter from the correspondent of the department at Denver City will be read with interest. The grasshopper is migrating eastward, and has reached Minnesota; whether it will spread over the western States cannot now be determined. But there does not appear any reason why it may not, unless the dry climate is essential to its existence.

The fact stated in the letter, that in Colorado the grasshopper was destroyed by a parasite, shows that, in this respect, it is like the Hessian fly, which, however, has two parasites. One of these deposits its egg within the egg of the Hessian fly, and both eggs hatch, the egg of the parasite producing a worm within the larva of the Hessian fly. The former lives on the latter, and from its skin emerges a fly. The other parasite lays its egg in the larvæ of the Hessian fly when in its flax-seed state, and hatching within it; this worm, like the other, lives on the larvæ in which it is hatched.

What singular means nature has established to prevent these destructive insects from attaining such numbers as would be entirely destructive to vegetation.

POST OFFICE, DENVER, COLORADO,  
October 1, 1865.

SIR: Our crops are now well harvested, and the yield is far greater than was anticipated in the summer, though still lamentably short of what it should have been. But for the grasshopper plague our Territory—though its specialty is gold mining—would this year have produced a sufficiency of breadstuffs and vegetables for its own supply. The grasshoppers made their invasion during the last ten days of August, 1864; they came from the north in myriads, filling the air; they devoured corn and other late crops, and deposited their eggs all over the country, until frost put an end to their generation. Last spring the young ones began coming out of the ground coequal with the starting of vegetation. All early crops suffered greatly, and on many farms they destroyed everything. When nearly grown they were attacked by a minute ichneumon fly, which deposited an egg in the back of the grasshopper; and that, in turn, bred a maggot, which ate and grew until the grasshopper died, when the worm entered the ground. This providential means destroyed the great majority of the grasshoppers, and the remainder took flight to the southward as soon as their wings were sufficiently developed.

Some fields of small grain suffered comparatively little, though in all the yield per acre was materially diminished by the insects feeding upon the young plants and the blades of more mature growth. Early potatoes, corn, and all kind of vegetables suffered equally or more than wheat, oats, and barley. Very late plantings fared better.

On the morning of September 10, a slight frost was observed in some localities. The succeeding morning it was more severe; killing corn and vegetables along the streams and in other low grounds, but leaving them almost untouched upon high lands. Most things—corn especially—were, however, well matured before that date.

Prices now are: barley and oats, 12 to 13 cents per pound; corn, (shelled,) 13 cents; wheat, 11 cents; potatoes, 10 to 12½ cents; cabbage, 30 cents; tomatoes, 25 to 35 cents, and other articles in proportion. Hay, \$25 to \$35 per ton.

A remarkable storm swept over the northern portion of the Rocky Mountain country on the 9th, 10th, and 11th of September. At Virginia City, Montana Territory, on the headwaters of the Missouri river, snow fell to the depth of two feet and the frost was very severe. In the Yellowstone basin General Connor's army lost 700 head of horses and mules by the severe weather. Freighters for Idaho and Montana Territories lost much stock. At Salt Lake City, Utah, the snow fell from two to four inches deep, and on the mountains near by it was sixteen inches deep. In the city named, hundreds of peach trees, still laden with fruit, were broken down. There the frost was not severe.

The storm reached as far south as this city, covering the high mountains west of us with new snow; but we only felt the verge of it in the frost above referred to. It reached but little, if any, further south, even on the high ranges.

Our autumn is very favorable.

Respectfully, your obedient servant,

WILLIAM N. BYERS.

Hon. ISAAC NEWTON,  
*Commissioner of Agriculture, Washington, D. C.*

## EUROPEAN CROPS AND PRICES.

The following extract from the London Mark Lane Express, of September 25, shows the state of the English crops and prices at the conclusion of the summer harvests:

"Up to Wednesday night the dry weather continued, when there was a heavy fall of rain; since which time the temperature has considerably diminished. The usual heat and dryness of the season have been very favorable to the badly harvested crops, which in some instances have been exposed to the rays of the sun to its great improvement, and the new samples of wheat have, during the week, come to market in much better condition, though the quality remains inferior. The downward tendency of prices has this week been partly checked, and we expect that rates have about seen their lowest point. Potatoes, moreover, are diseased nearly as much as stock, and though both, on the principle of fear, may be forced off to market, a population of thirty millions is certain eventually to feel the consequences. We write, however, not for alarm, but caution, and that the present low price of breadstuffs should not lead to false confidence or waste, whatever may be thought of the future in England. Dantzic has not given way in the least for fine qualities. Paris prices have rather hardened, and the markets in Belgium and Holland have done the same; while in the interior of Germany, though business has been dull, there has been no giving way. In America the present rates are wholly impracticable as to pecuniary advantage by imports, the price of wheat being actually beyond our own, without calculating freight and duty."

The same paper, of October 2, says:

"The last week in September has closed in brilliant sunshine and summer heat, giving such an opportunity to the north for harvest purposes as very seldom occurs, and serving somewhat to abate the general fears about the deficiency of the crops of the kingdom at a period when the prospect of foreign imports has materially lessened. Nearly all that was upon the ground before the sickle or the scythe began their work has now been housed, and though much is in poor condition, the damage by actual sprouting has been small. As a nation, therefore, we have been signally favored, and we doubt not that a willing tribute of thanksgiving has been sent up from a multitude of hearts. There is a timely increase of live stock in Ireland, and hence a material increase of human food at a time when this will be sure to fetch its price to growers, and be a signal benefit to the kingdom. Our belief that the late depression in new wheat had run its term (of low prices) has been justified by the state of the market, which throughout the country, with improved condition in the samples, has reached to fully 24 cents per 480 pounds; but the more we hear of the potato crop, the less assurance have we of its keeping qualities. In some localities the whole growth has been lost."

In Europe no changes have taken place in prices. We have here the concluding accounts of the English harvest, and it is evidently not so short as was anticipated. As stated previously, we think it will be found that a good deal of grain remains over in Great Britain; but the continued progress and fatality of the cattle plague must make a great difference in the consumption of breadstuffs. Should this disease reach Ireland, and the potato destruction be serious, Great Britain will certainly need a great deal more than ordinary foreign supplies. Canada, however, has better crops than usual of late years.

## EXPORTS AND PRICES OF FARM PRODUCE.

*Exports from New York of the leading agricultural products from January 1, 1865, to October 17, compared with those for the same time in 1864, and their prices in New York and Chicago.*

Articles.	From January 1, 1865, to Octo'r 17.	From January 1, 1864, to Octo'r 17.	Prices October 17, 1865—New York.	Prices October 18, 1865—Chicago.
Wheat flour . . . . . bbls..	1, 107, 681	1, 693, 523	\$7 90 to \$9 20	\$7 25 to \$13 00
Rye flour . . . . . bbls..	2, 228	2, 647		
Corn meal . . . . . bbls..	105, 913	93, 225		
Wheat . . . . . bush..	1, 779, 847	11, 723, 164	1 75 to 2 75	1 13 to 1 95
Corn . . . . . bush..	2, 393, 900	801, 966	86 to 89	42 to 45
Rye . . . . . bush..	170, 691	453	1 19 to 1 20	57 to 62
Barley . . . . . bush..		150	1 10 to 1 32½	65 to 1 30
Oats . . . . . bush..	67, 384	38, 810	56 to 60	20½ to 25½
Peas . . . . . bush..	43, 586	168, 186		
Cotton . . . . . bales..	91, 311	25, 561	60	
Hay . . . . . bales..	27, 271	30, 727	60 to 80	75 to 80
Hops . . . . . bales..	13, 329	17, 729	20 to 60	45 to 50
Leaf tobacco . . . . . hhds..	61, 826	67, 808	7 to 27	
Leaf tobacco . . . . . pkgs..	65, 728	59, 775		
Manufact'd tobacco . . . . . lbs..	3, 590, 979	4, 464, 417		85 to 1 15
Petroleum . . . . . galls..	9, 365, 633	17, 742, 112	63	
Pork . . . . . bbls..	99, 747	118, 391	32 25 to 34 00	27 00 to 37 50
Beef . . . . . bbls..	32, 878	32, 118		
Beef . . . . . tcs..	42, 342	43, 959		
Cut meats . . . . . lbs..	30, 463, 316	87, 425, 036	16½ to 23½	17 to 25
Butter . . . . . lbs..	9, 270, 643	11, 589, 123	30 to 46	32 to 40
Cheese . . . . . lbs..	35, 037, 983	37, 239, 397	15 to 18	15 to 18
Lard . . . . . lbs..	20, 214, 954	49, 001, 142	24½ to 28½	30
Tallow . . . . . lbs..	14, 020, 625	27, 396, 694	14½ to 15	12½ to 14
Wool, (fleece) . . . . . lbs..			55 to 75	55 to 61

## THE CROPS IN SEPTEMBER, 1865.

The following tables show the *amount* and *quality* of the summer harvested crops, and the *condition* of the fall crops; the number of cattle fattening in September, and the comparative amount of old wheat on hand. The first of these tables shows the State averages *in tenths*, compiled from the returns of our correspondents in the several counties; and the second exhibits the amount of the summer harvested crops reduced to bushels and tons.

The usual comments on these tables will be found following them; and it is here necessary to make no other explanation than that the averages as to *amount*, *quality*, *appearance*, and *injury* are given *indirectly*—that is, all numbers over 10 indicate that these are *above* the crop of 1864, and all under 10 are *below* the crop of that year. Thus, as to wheat, 9 means that the quality is inferior to the crop of 1864 by 1-tenth; that 8 is two-tenths below it in amount, whilst 11½ means it is 1½ tenths better.



Table showing the State averages in tenths, in answer to the questions asked.

STATES.	WHEAT.		RYE.		BARLEY.		OATS.		HAY.	
	Average amount of crop compared with 1864.	Average quality compared with 1864.	Average amount of crop compared with 1864.	Average quality compared with 1864.	Average amount of crop compared with 1864.	Average quality compared with 1864.	Average amount of crop compared with 1864.	Average quality compared with 1864.	Average amount of crop compared with 1864.	Average quality compared with 1864.
Maine.....	10½	10 $\frac{7}{17}$	10½	11¼	11	10¼	11½	10½	13½	10½
New Hampshire..	11½	11	13¾	10 $\frac{5}{7}$	10¾	10½	12½	11½	11¾	10 $\frac{5}{7}$
Vermont.....	11 $\frac{5}{8}$	10 $\frac{3}{8}$	10 $\frac{7}{8}$	10 $\frac{7}{8}$	10 $\frac{5}{8}$	10 $\frac{5}{8}$	11 $\frac{3}{8}$	11	11 $\frac{3}{8}$	11 $\frac{3}{8}$
Massachusetts ...	9½	10	10	9 $\frac{7}{8}$	9 $\frac{3}{8}$	10	10	9 $\frac{6}{10}$	11 $\frac{1}{10}$	10 $\frac{3}{10}$
Rhode Island ....	10	10	8½	9	7 $\frac{3}{8}$	7 $\frac{3}{8}$	7 $\frac{3}{8}$	7 $\frac{3}{8}$	10½	11½
Connecticut.....	10	10½	10 $\frac{3}{8}$	10½	10¼	10	11 $\frac{3}{8}$	11½	13¼	10½
New York.....	11½	10 $\frac{3}{8}$	10½	10	11 $\frac{3}{8}$	10 $\frac{3}{4}$	13 $\frac{5}{8}$	11 $\frac{3}{8}$	13½	10 $\frac{3}{4}$
New Jersey.....	8	8 $\frac{2}{11}$	8 $\frac{3}{4}$	8 $\frac{3}{8}$	9 $\frac{3}{8}$	9½	11	10½	10 $\frac{7}{12}$	9¾
Pennsylvania ....	9½	9	9 $\frac{3}{8}$	9½	9½	10	12½	11½	13½	9¾
Maryland .....	8 $\frac{3}{8}$	7 $\frac{3}{8}$	9	9½	10	10	11 $\frac{3}{10}$	10	10 $\frac{8}{10}$	9¾
Delaware.....	5	5	9	8½	.....	.....	10	10	9	9
Kentucky .....	6 $\frac{3}{8}$	6 $\frac{5}{8}$	8 $\frac{3}{8}$	9	9 $\frac{3}{8}$	8½	11 $\frac{1}{10}$	10 $\frac{3}{8}$	11½	9½
Ohio .....	8 $\frac{5}{8}$	7 $\frac{5}{8}$	9½	9½	9 $\frac{5}{8}$	9 $\frac{3}{8}$	13½	10 $\frac{3}{8}$	15½	8½
Michigan .....	11 $\frac{8}{11}$	9	10½	10	11½	10¼	15½	12	14½	9½
Indiana .....	5 $\frac{5}{8}$	6½	9½	8 $\frac{3}{8}$	10½	9½	13¼	11	13	8½
Illinois .....	7½	7½	9½	9½	9½	8 $\frac{3}{4}$	11½	9½	12	7½
Missouri.....	9	8½	9½	9½	9½	9	11 $\frac{3}{4}$	9 $\frac{3}{8}$	13	8 $\frac{3}{8}$
Wisconsin.....	14½	15½	11 $\frac{3}{8}$	11	12½	11½	15½	12	13½	10
Iowa .....	10 $\frac{3}{4}$	9½	10	9½	9 $\frac{3}{8}$	9 $\frac{3}{8}$	13	10½	12½	10
Minnesota .....	13	10 $\frac{3}{4}$	11	10 $\frac{3}{8}$	12	10 $\frac{3}{8}$	15	11 $\frac{3}{11}$	11	10
Kansas.....	9½	8 $\frac{3}{8}$	10	9½	11 $\frac{3}{11}$	9 $\frac{8}{11}$	10 $\frac{3}{8}$	9 $\frac{8}{15}$	14½	11 $\frac{8}{16}$
West Virginia....	8	8½	10	9 $\frac{3}{8}$	9½	8½	12 $\frac{3}{8}$	10½	13½	9
Nebraska Ter ....	13½	9½	13	10¼	13½	10½	15	11½	16	12

Table showing the State averages in tenths, &amp;c.—Continued.

STATES.	CORN.		SORGHUM.		BUCKWHEAT.		POTATOES.		TOBACCO.	
	Average appearance of crop on the 1st day of October, 1865.	Injury to same from all causes.	Average appearance of crop on the 1st day of October, 1865.	Injury to same from all causes.	Average appearance of crop on the 1st day of October, 1865.	Injury to same from all causes.	Average appearance of crop on the 1st day of October, 1865.	Injury to same from all causes.	Average appearance of crop on the 1st day of October, 1865.	Injury to same from all causes.
Maine.....	11 $\frac{5}{12}$	6 $\frac{5}{6}$	10	10	10	6 $\frac{2}{3}$	9 $\frac{1}{2}$	8 $\frac{2}{3}$	10 $\frac{1}{2}$	7 $\frac{2}{3}$
New Hampshire..	10 $\frac{3}{4}$	7 $\frac{3}{4}$	-----	-----	10 $\frac{1}{2}$	8 $\frac{1}{2}$	8 $\frac{1}{2}$	8	12	10
Vermont.....	12	5 $\frac{1}{2}$	10	-----	10 $\frac{2}{3}$	6 $\frac{7}{8}$	10 $\frac{2}{3}$	7 $\frac{2}{3}$	9 $\frac{2}{3}$	8
Massachusetts....	10	7 $\frac{1}{10}$	8	12	7 $\frac{1}{2}$	12 $\frac{3}{8}$	8 $\frac{4}{9}$	7	8 $\frac{1}{2}$	8 $\frac{1}{8}$
Rhode Island....	10 $\frac{3}{8}$	-----	-----	-----	-----	-----	9 $\frac{1}{2}$	4	9 $\frac{1}{2}$	4 $\frac{1}{2}$
Connecticut.....	11 $\frac{1}{2}$	10 $\frac{1}{4}$	11 $\frac{1}{2}$	9 $\frac{2}{3}$	10	9 $\frac{1}{4}$	9 $\frac{2}{3}$	9	9	8
New York.....	11 $\frac{1}{4}$	8	10	6 $\frac{7}{10}$	9 $\frac{2}{3}$	8 $\frac{1}{2}$	9 $\frac{2}{3}$	8	9 $\frac{2}{3}$	6 $\frac{1}{2}$
New Jersey.....	11 $\frac{1}{12}$	7 $\frac{2}{3}$	10 $\frac{2}{3}$	4 $\frac{7}{8}$	9	8 $\frac{2}{11}$	10 $\frac{1}{4}$	9 $\frac{1}{2}$	9 $\frac{2}{3}$	4 $\frac{1}{5}$
Pennsylvania....	12	7 $\frac{1}{2}$	10 $\frac{2}{3}$	6 $\frac{1}{2}$	10 $\frac{2}{3}$	8 $\frac{1}{4}$	9 $\frac{1}{6}$	10 $\frac{2}{3}$	10	9
Maryland.....	12 $\frac{7}{10}$	7	11 $\frac{1}{4}$	8	8	10	11 $\frac{1}{2}$	8 $\frac{1}{10}$	10 $\frac{2}{3}$	8
Delaware.....	10	10 $\frac{1}{2}$	10	6	10 $\frac{1}{2}$	5 $\frac{1}{2}$	9	10 $\frac{1}{2}$	-----	-----
Kentucky.....	13	4 $\frac{1}{2}$	11 $\frac{1}{2}$	4 $\frac{1}{2}$	10 $\frac{2}{11}$	6 $\frac{2}{3}$	10	7 $\frac{1}{2}$	9	5 $\frac{1}{2}$
Ohio.....	12	5 $\frac{2}{3}$	11 $\frac{1}{6}$	6 $\frac{1}{2}$	10 $\frac{1}{4}$	6 $\frac{7}{8}$	9 $\frac{1}{6}$	9	9 $\frac{2}{3}$	7 $\frac{1}{2}$
Michigan.....	14	7	11 $\frac{2}{3}$	7 $\frac{1}{6}$	12 $\frac{2}{3}$	7 $\frac{1}{2}$	13 $\frac{1}{2}$	7 $\frac{1}{2}$	10 $\frac{1}{2}$	5 $\frac{2}{3}$
Indiana.....	14 $\frac{1}{4}$	7 $\frac{3}{10}$	12 $\frac{1}{4}$	6 $\frac{1}{6}$	10 $\frac{7}{12}$	6 $\frac{1}{2}$	10 $\frac{1}{2}$	10 $\frac{2}{3}$	9 $\frac{5}{6}$	8
Illinois.....	11 $\frac{3}{8}$	7	11 $\frac{1}{9}$	7 $\frac{1}{2}$	10	8	11 $\frac{1}{2}$	7 $\frac{2}{3}$	10 $\frac{1}{4}$	7 $\frac{2}{3}$
Missouri.....	12 $\frac{2}{3}$	6 $\frac{1}{2}$	13	6 $\frac{1}{2}$	9 $\frac{2}{3}$	6 $\frac{2}{3}$	13 $\frac{1}{2}$	7 $\frac{2}{3}$	11	8
Wisconsin.....	14	7	12	7 $\frac{2}{3}$	11 $\frac{1}{2}$	8	12 $\frac{1}{6}$	9 $\frac{5}{6}$	10 $\frac{1}{2}$	6 $\frac{2}{3}$
Iowa.....	11	7	11 $\frac{2}{3}$	6 $\frac{2}{3}$	10 $\frac{1}{4}$	8	11 $\frac{1}{2}$	7 $\frac{2}{3}$	10 $\frac{1}{4}$	7
Minnesota.....	12 $\frac{3}{11}$	7	11	6 $\frac{2}{3}$	11 $\frac{2}{3}$	8	14	7	10	8 $\frac{5}{9}$
Kansas.....	14 $\frac{1}{4}$	7	12 $\frac{1}{2}$	5 $\frac{1}{4}$	9 $\frac{2}{3}$	8	13 $\frac{1}{2}$	8 $\frac{1}{2}$	10 $\frac{1}{2}$	6 $\frac{2}{3}$
West Virginia....	13 $\frac{5}{8}$	7 $\frac{2}{3}$	11 $\frac{1}{2}$	7 $\frac{5}{6}$	10 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	11	9
Nebraska Ter....	17	5 $\frac{1}{4}$	13 $\frac{3}{4}$	10	9	10	14 $\frac{2}{3}$	6 $\frac{1}{6}$	12	10 $\frac{1}{2}$

Table showing the State averages in tenths, &amp;c.—Continued.

STATES.	COTTON.		FATTENING CATTLE.		OLD WHEAT.	WEATHER FOR SEPTEMBER.				
	Average amount of this crop compared with 1864.	Average appearance on the 1st day of October, 1865.	Average number of fattening cattle compared with same time in 1864.	Average condition of same compared with last year.	Average amount of old wheat in your county compared with same on hand in September, 1864.	In weeks.				
						Favorable.	Wet.	Very wet.	Dry.	Very dry.
Maine .....			8 $\frac{1}{2}$	10 $\frac{1}{2}$	10	4	1	.....	19	20
New Hampshire ..			8 $\frac{3}{4}$	9 $\frac{1}{4}$	9 $\frac{1}{4}$	3	.....	.....	11	14
Vermont .....			9 $\frac{5}{9}$	10 $\frac{5}{9}$	9 $\frac{2}{9}$	15	1	.....	8	12
Massachusetts .....			8 $\frac{2}{3}$	9 $\frac{2}{3}$	8 $\frac{2}{3}$	0	0	0	8	32
Rhode Island .....			8	9 $\frac{1}{2}$	10	0	0	0	2	10
Connecticut .....			8	10 $\frac{1}{4}$	10	1	0	0	6	10
New York .....			8 $\frac{1}{2}$	10 $\frac{1}{4}$	8 $\frac{1}{2}$	57	18	6	54	17
New Jersey .....	10	10	8 $\frac{2}{3}$	10 $\frac{2}{10}$	7 $\frac{2}{3}$	30	4	2	9	3
Pennsylvania .....			8 $\frac{2}{3}$	10 $\frac{2}{3}$	8 $\frac{1}{2}$	98	41	11	22	1
Maryland .....	10 $\frac{2}{3}$	10	8 $\frac{1}{3}$	11	7 $\frac{1}{3}$	9	2	.....	19	10
Delaware .....			8	10	9	3	0	0	1	4
Kentucky .....	10 $\frac{1}{10}$	10 $\frac{8}{10}$	8 $\frac{1}{2}$	11 $\frac{3}{5}$	6 $\frac{1}{5}$	34	27	5	26	0
Ohio .....			8 $\frac{1}{6}$	10 $\frac{2}{3}$	7 $\frac{2}{3}$	87	66	12	15	0
Michigan .....			8 $\frac{1}{11}$	10 $\frac{2}{3}$	9 $\frac{1}{3}$	56	45	25	10	0
Indiana .....	16 $\frac{1}{2}$	13 $\frac{1}{2}$	8 $\frac{1}{2}$	10 $\frac{2}{3}$	10 $\frac{1}{3}$	86	63	24	13	2
Illinois .....	11	10 $\frac{4}{10}$	9 $\frac{1}{2}$	11	8 $\frac{1}{6}$	96	53	25	36	3
Missouri .....	12 $\frac{1}{4}$	10 $\frac{1}{2}$	9 $\frac{2}{3}$	11 $\frac{1}{3}$	8 $\frac{1}{9}$	56	41	9	20	6
Wisconsin .....			9	11	8 $\frac{1}{4}$	77	30	16	17	0
Iowa .....	12	11	9	10	8 $\frac{2}{7}$	110	21	2	47	8
Minnesota .....			10	11	9 $\frac{2}{3}$	36	23	6	22	0
Kansas .....	7 $\frac{7}{10}$	9 $\frac{1}{2}$	11	11	8	39	18	0	7	0
West Virginia .....	10	10	9 $\frac{1}{3}$	11 $\frac{1}{9}$	8	29	18	2	15	0
Nebraska Ter .....			11 $\frac{1}{2}$	11	8 $\frac{1}{2}$	6	2	0	10	2
						842	474	145	397	154

*Table showing the amount of wheat, in bushels, as estimated from the returns of correspondents.*

States.	1860.	1862.	1863.	1864.	1865.
Maine .....	233, 877	350, 815	215, 734	167, 194	175, 591
New Hampshire.....	238, 966	318, 954	255, 163	251, 518	291, 098
Vermont .....	431, 127	502, 981	452, 683	497, 951	558, 811
Massachusetts ....	119, 783	129, 765	129, 765	128, 143	107, 465
Rhode Island .....	1, 131	1, 413	1, 413	1, 413	1, 413
Connecticut.....	52, 401	59, 901	59, 901	71, 881	71, 881
New York .....	8, 681, 100	13, 021, 650	13, 021, 650	10, 918, 615	12, 556, 406
New Jersey.....	1, 763, 128	1, 808, 128	1, 808, 128	1, 582, 113	1, 265, 690
Pennsylvania .....	13, 045, 231	15, 654, 255	15, 654, 255	12, 523, 404	11, 688, 511
Maryland.....	6, 103, 480	6, 553, 480	7, 208, 828	6, 487, 946	5, 479, 635
Delaware.....	912, 941	1, 217, 254	1, 217, 254	1, 054, 954	527, 477
Kentucky .....	7, 394, 811	5, 546, 108	5, 546, 108	3, 882, 275	2, 788, 184
Ohio .....	14, 532, 570	30, 796, 032	28, 742, 963	20, 407, 503	17, 601, 472
Michigan.....	8, 313, 185	14, 963, 735	13, 966, 153	13, 966, 153	16, 378, 488
Indiana .....	15, 219, 120	20, 292, 160	20, 292, 160	22, 321, 376	13, 020, 803
Illinois .....	24, 159, 500	32, 213, 500	31, 408, 163	33, 371, 173	25, 266, 745
Missouri.....	4, 227, 586	3, 170, 690	2, 853, 621	3, 281, 514	2, 953, 363
Wisconsin .....	15, 812, 625	20, 765, 781	20, 842, 359	14, 168, 317	20, 307, 920
Iowa.....	8, 433, 205	10, 541, 506	12, 649, 807	12, 649, 807	13, 698, 542
Minnesota .....	2, 195, 812	2, 927, 749	2, 634, 975	2, 634, 975	3, 425, 467
Kansas .....	168, 527	202, 232	262, 953	201, 598	191, 519
Nebraska Territory ...	72, 268	150, 000	180, 600	126, 000	166, 348
Total.....	132, 934, 782	181, 188, 089	179, 404, 036	160, 695, 823	148, 522, 829



*Table showing the amount of rye, in bushels, as estimated from the returns of correspondents.*

States.	1860.	1862.	1863.	1864.	1865.
Maine .....	123, 290	184, 389	165, 951	125, 612	135, 042
New Hampshire.....	128, 248	162, 033	145, 830	109, 373	146, 872
Vermont.....	130, 976	130, 976	130, 976	140, 798	151, 748
Massachusetts .....	388, 085	388, 085	388, 085	413, 957	413, 957
Rhode Island .....	28, 259	33, 911	33, 911	37, 302	31, 707
Connecticut.....	618, 702	618, 762	618, 762	721, 889	776, 030
New York .....	4, 786, 905	5, 385, 268	5, 385, 268	5, 205, 759	5, 309, 874
New Jersey.....	1, 439, 497	1, 499, 497	1, 499, 497	1, 424, 523	1, 246, 458
Pennsylvania .....	5, 474, 792	6, 843, 427	6, 843, 427	6, 843, 427	6, 569, 690
Maryland.....	518, 901	608, 901	548, 011	529, 744	476, 770
Delaware .....	27, 209	34, 011	37, 412	41, 153	37, 038
Kentucky .....	1, 055, 262	791, 447	791, 447	554, 014	476, 453
Ohio .....	656, 146	1, 079, 040	863, 232	704, 974	687, 350
Michigan .....	494, 197	494, 197	494, 197	434, 894	413, 150
Indiana .....	400, 226	444, 695	411, 343	397, 632	371, 123
Illinois .....	981, 322	981, 322	883, 190	850, 071	833, 069
Missouri.....	293, 262	393, 262	219, 947	237, 542	218, 529
Wisconsin .....	888, 534	1, 066, 241	1, 012, 929	810, 343	945, 400
Iowa.....	176, 055	111, 266	122, 392	119, 333	119, 333
Minnesota .....	124, 259	155, 323	179, 791	161, 974	178, 171
Kansas.....	3, 928	4, 713	5, 184	4, 061	4, 061
Nebraska Territory ...	1, 185	2, 000	2, 000	1, 600	2, 080
Total.....	18, 793, 198	21, 239, 451	20, 782, 782	19, 872, 975	19, 543, 905

*Table showing the amount of barley, in bushels, as estimated from the returns of correspondents.*

States.	1860.	1862.	1863.	1864.	1865.
Maine .....	802, 109	1, 002, 636	1, 002, 636	668, 424	735, 266
New-Hampshire.....	121, 103	141, 287	127, 159	96, 278	101, 979
Vermont .....	75, 282	94, 102	94, 102	94, 102	100, 375
Massachusetts ...	134, 891	168, 613	151, 752	149, 584	144, 598
Rhode Island .....	40, 993	51, 241	46, 117	41, 506	31, 821
Connecticut.....	20, 813	20, 813	20, 813	18, 732	19, 200
New York .....	4, 186, 667	4, 882, 778	4, 882, 778	3, 710, 911	4, 329, 406
New Jersey .....	24, 915	33, 220	29, 098	29, 098	27, 167
Pennsylvania .....	530, 716	636, 859	573, 174	630, 491	603, 470
Maryland.....	17, 350	21, 887	19, 699	26, 591	26, 591
Delaware .....	3, 646	4, 254	5, 105	4, 595	4, 595
Kentucky .....	270, 685	203, 014	203, 014	172, 563	161, 778
Ohio .....	1, 601, 082	1, 512, 525	1, 399, 086	1, 585, 630	1, 559, 203
Michigan .....	305, 914	407, 885	407, 885	338, 388	391, 562
Indiana .....	296, 374	345, 767	311, 191	339, 198	350, 504
Illinois .....	1, 175, 651	1, 175, 651	1, 205, 042	1, 144, 790	1, 058, 931
Missouri .....	223, 502	171, 377	171, 377	162, 809	148, 855
Wisconsin .....	678, 992	905, 323	950, 589	674, 919	843, 649
Iowa .....	454, 116	544, 939	599, 432	584, 446	561, 068
Minnesota .....	125, 130	156, 412	156, 412	148, 592	178, 310
Kansas .....	4, 128	4, 953	5, 448	5, 901	6, 661
Nebraska Territory ...	1, 243	2, 486	5, 446	4, 630	6, 297
Total.....	10, 926, 765	12, 488, 022	11, 368, 155	10, 632, 178	11, 391, 286

*Table showing the amount of oats, in bushels, as estimated from the returns of correspondents.*

States.	1860.	1862.	1863.	1864.	1865.
Maine .....	2,988,939	3,738,423	3,364,581	2,102,994	2,348,342
New Hampshire .....	1,329,213	1,495,365	1,345,829	1,095,891	1,346,380
Vermont .....	3,511,605	4,389,506	3,950,556	3,611,938	4,213,926
Massachusetts .....	1,180,075	1,475,094	1,327,585	1,194,827	1,194,827
Rhode Island .....	234,453	253,990	203,192	182,873	140,202
Connecticut .....	1,522,218	1,603,936	1,764,329	2,011,334	2,363,317
New York .....	35,175,133	43,968,916	43,968,916	35,724,746	48,675,090
New Jersey .....	4,539,132	5,446,958	4,902,263	5,735,647	6,309,211
Pennsylvania .....	27,387,149	34,233,936	34,233,936	37,657,329	46,571,661
Maryland .....	3,959,298	4,524,912	4,072,421	5,429,894	6,135,779
Delaware .....	1,046,910	1,308,637	1,570,364	1,884,437	1,884,437
Kentucky .....	4,617,029	3,562,772	3,562,772	4,346,326	4,824,421
Ohio .....	15,479,133	10,930,935	12,024,025	14,428,833	18,963,608
Michigan .....	4,073,098	5,430,797	5,430,797	4,810,136	7,275,331
Indiana .....	5,028,755	5,028,755	5,531,630	6,084,793	8,062,351
Illinois .....	15,336,072	17,892,200	19,681,420	24,273,751	28,088,197
Missouri .....	3,680,870	2,660,653	2,128,522	2,128,522	2,501,013
Wisconsin .....	11,059,270	13,271,124	14,598,236	12,043,538	18,466,758
Iowa .....	5,879,653	7,055,583	7,761,141	9,313,369	12,007,380
Minnesota .....	2,202,050	2,934,067	2,053,848	2,259,232	3,388,848
Kansas .....	80,744	96,892	116,270	146,500	155,290
Nebraska Territory ...	79,977	159,954	267,939	223,284	335,926
Total .....	151,290,980	171,463,405	173,800,575	176,690,064	225,252,295



Table showing the tons of hay, as estimated from the returns of correspondents.

States.	1860.	1862.	1863.	1864.	1865.
Maine.....	975,716	1,170,859	1,170,859	1,085,705	1,429,511
New Hampshire.....	642,741	771,289	771,289	694,161	793,327
Vermont.....	919,066	985,654	985,654	850,127	991,814
Massachusetts.....	665,331	908,289	908,289	760,517	844,173
Rhode Island.....	82,725	82,725	82,725	62,044	64,312
Connecticut.....	562,445	562,445	562,445	459,956	596,191
New York.....	3,564,786	4,455,982	4,901,580	3,921,264	5,288,352
New Jersey.....	508,729	529,729	423,783	436,496	461,958
Pennsylvania.....	2,245,420	2,245,420	1,796,336	1,796,336	2,463,545
Maryland.....	191,944	195,244	156,195	167,909	181,341
Delaware.....	36,973	40,054	32,043	33,111	29,800
Kentucky.....	158,484	118,863	106,977	112,325	127,301
Ohio.....	1,602,513	2,073,398	1,347,711	1,415,096	2,158,021
Michigan.....	756,908	1,135,362	1,059,671	847,737	1,231,272
Indiana.....	635,322	847,096	931,855	962,805	1,251,646
Illinois.....	1,834,265	2,292,831	2,063,548	2,166,725	2,600,070
Missouri.....	401,070	467,915	327,541	399,599	519,479
Wisconsin.....	853,799	1,067,248	1,067,248	789,765	1,066,182
Iowa.....	707,260	848,712	678,970	814,764	1,018,455
Minnesota.....	274,952	366,603	256,621	249,289	274,217
Kansas.....	50,812	63,515	82,569	82,569	118,348
Nebraska Territory....	25,320	28,735	22,988	18,391	29,425
Total.....	18,723,022	20,257,968	19,736,847	18,116,751	23,538,740

## COMMENTS ON THE PRECEDING TABLES.

*Wheat.*—In the August report estimates are given of this crop, showing that the deficit in *quantity and quality*, compared with the crop of 1864, amounted to 26,241,698 bushels. In the report for September the injury to the wheat crop arising from the wet weather is separated from other injuries, and in the returns from correspondents now given the *quantity and quality* are separated.

In nearly all the States the representations are, that the wheat proved better on the threshing than anticipated, and the estimates based on the last returns show that the deficit in *quantity*, compared with the crop of 1864, is 12,172,994 bushels. It will be seen from the tables that the quantity and quality in the eastern States and in New York are slightly above those of the crop of 1864, but in all the other States, except Wisconsin and Minnesota, the quality is below that of 1864, and in nearly all of them the quality is below the yield. Hence the deficit in *quality* is greater than in *quantity*, making the total deficit greater than given in the August report.

*Old wheat*.—The return of this gives a comparison of the amount on hand in September, 1865, compared with the amount on hand in September, 1864. It will be seen that it is less this year than last; but many correspondents state that it was purchased up in August. As complaints are made at the seaboard that the wheat is not coming forward, it is to be presumed that the old wheat, on account of its superior quality, is held back. How much there is of it cannot be determined, for the great scarcity of corn last year caused an unusual consumption of wheat.

*Rye*.—The decrease of this product is 329,070 bushels.

*Barley*.—The gain of this crop is 759,108 bushels.

*Oats*.—There is a great increase in this crop. It is much the largest ever produced, the tables showing a gain of 48,562,231 bushels.

The amount of these four crops for the last three years is as follows:

	1865.	1864.	1863.
Wheat, bushels . .	148, 522, 829	160, 695, 823	179, 404, 036
Rye,           “	19, 543, 905	19, 872, 975	20, 782, 782
Barley,       “	11, 391, 286	10, 632, 178	11, 368, 155
Oats,          “	225, 252, 295	176, 690, 064	173, 800, 575
	<hr/>	<hr/>	<hr/>
Total bushels . .	404, 710, 315	367, 891, 040	385, 355, 584
	<hr/>	<hr/>	<hr/>

The increase in bushels for 1865 is 36,819,275 over the yield of 1864.

*Hay*.—This crop is large, being 5,421,989 tons greater than in 1864. The quality is good in those States in which the wheat was good, and in the other States it is not as much injured as at first supposed.

*The fall crops*.—It is unnecessary to dwell upon the condition of these; it is good. The corn crop throughout the entire country, north and south, has never before been equalled. The monthly report for November will contain the estimates of these in bushels, &c.

*Cotton*.—This crop has improved in the northern States, but reports from the south indicate that it is much injured by the rains and worms. The price of cotton has advanced materially in consequence; and what effect this fact will have on the price of wool cannot be certainly known at this time; it cannot but be favorable to the wool-grower.

*Fattening cattle.*—There is a very material decrease of these in nearly all the States, but as the census never took an account of their numbers in 1860, there is no basis by which this department can calculate the actual decrease in numbers.

## IMPORTS AND EXPORTS.

### IMPORTS.

*Imports of foreign dry goods at New York for the first nine months in the years 1863, 1864, and 1865, ending with 30th day of September.*

#### ENTERED FOR CONSUMPTION.

	1863.	1864.	1865.
Manufactures of wool.....	\$15,904,520	\$15,781,940	\$17,604,327
Manufactures of cotton.....	3,983,134	5,186,760	6,012,364
Manufactures of silk.....	9,187,353	10,433,787	11,105,063
Manufactures of flax.....	5,191,227	6,068,994	6,626,246
Miscellaneous.....	2,238,899	2,543,147	2,250,870
Total entered for consumption.....	36,505,133	40,014,628	43,598,870

#### WITHDRAWN FROM WAREHOUSE.

Manufactures of wool.....	\$4,855,343	\$8,168,539	\$8,471,475
Manufactures of cotton.....	1,459,778	2,343,793	2,533,705
Manufactures of silk.....	2,414,007	3,751,957	3,263,091
Manufactures of flax.....	1,684,640	2,683,507	3,625,800
Miscellaneous.....	385,843	617,569	713,754
Total withdrawn from warehouse.....	10,799,611	17,565,365	18,607,825
Add entered for consumption.....	36,505,133	40,014,628	43,598,870
Total thrown on market.....	47,304,744	57,579,993	62,206,695

### EXPORTS.

*Exports of domestic produce, foreign merchandise, and specie, from New York, from January 1 to October 3, 1865—nine months.*

	1863.	1864.	1865.
Exclusive of specie.....	\$133,156,650	\$169,797,396	\$120,219,890
Specie, (to September 30).....	32,517,027	35,278,801	22,675,763
Total.....	165,673,677	205,076,197	142,895,653



# METEOROLOGY.

FROM THE SMITHSONIAN INSTITUTION.

Table showing the average temperature and fall of rain (in inches and tenths) for the month of September in each year named, and for the five years first named, collectively, with the average number of places in each State in which the observations were made.

States and Territories.	Av. number of places.	Averages, 1855.		Averages, 1856.		Averages, 1857.		Averages, 1858.		Averages, 1859.		Averages for five years.		Averages, 1863.		Averages, 1864.		Averages, 1865.	
		Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.
Maine.....	6	Deg. 56.4	in. 1.8	Deg. 57.8	in. 1.6	Deg. 58.8	in. 1.5	Deg. 59.9	in. 4.0	Deg. 57.6	in. 2.9	Deg. 53.9	in. 3.68	Deg. 51.7	in. 4.22	Deg. 62.8	in. 1.39	Deg. 62.8	in. 1.39
New Hampshire.....	1	59.2	0.3	58.7	1.3	58.1	1.8	58.0	4.2	56.9	3.1	51.9	3.34	56.2	3.86	63.3	2.22	63.3	2.22
Vermont.....	1	58.1	4.3	58.3	4.0	59.0	3.8	58.0	4.0	57.8	3.7	56.3	3.42	53.8	5.34	61.0	2.53	61.0	2.53
Massachusetts.....	12	61.1	1.0	61.3	2.3	61.1	2.9	61.1	3.1	59.6	3.7	57.8	1.74	58.6	3.01	65.9	0.98	65.9	0.98
Rhode Island.....	1	61.9	0.3	60.8	2.3	61.1	2.3	61.1	3.1	59.6	3.7	57.8	1.74	58.6	3.01	65.9	0.98	65.9	0.98
Connecticut.....	4	62.3	0.5	63.4	4.1	61.5	3.0	61.4	4.9	59.1	4.0	61.5	3.3	58.1	3.26	66.6	0.53	66.6	0.53
New York.....	4	62.2	1.9	61.9	3.7	61.2	2.8	61.2	3.7	59.3	3.2	59.8	3.5	56.9	5.45	69.7	4.07	69.7	4.07
New Jersey.....	81	63.4	2.9	63.1	2.7	63.3	2.7	63.6	1.5	62.1	7.3	61.3	3.5	60.0	61.9	69.5	3.71	69.5	3.71
Pennsylvania.....	60	66.7	4.5	64.1	2.4	64.4	1.7	64.1	1.7	62.7	7.0	64.4	3.3	62.4	66.7	69.6	6.95	69.6	6.95
Delaware.....	1	66.5	1	68.4	2.5	71.8	2.5	71.8	2.7	68.9	4.7	68.9	3.3	67.1	3.33	74.4	1.81	74.4	1.81
Maryland.....	1	67.8	8.0	66.3	1.4	65.1	1.4	65.1	3.6	66.3	3.4	66.5	4.7	61.1	3.09	86.8	2.57	86.8	2.57
District of Columbia.....	5	70.1	2.9	67.4	1.9	66.5	1.6	66.5	2.9	67.2	3.4	66.5	4.7	61.1	3.09	86.8	2.57	86.8	2.57
South Carolina.....	5	78.2	3.0	72.6	2.1	72.0	1.4	72.0	6.0	71.1	3.1	74.4	3.1	67.8	4.33	74.1	6.19	74.1	6.19
Tennessee.....	2	73.8	7.3	65.1	1.4	70.2	1.4	69.7	1.8	69.4	3.4	69.7	3.1	67.8	4.33	74.1	6.19	74.1	6.19
Kentucky.....	4	74.5	4.7	64.8	1.4	65.4	2.3	67.3	2.6	67.4	3.2	68.6	2.9	62.1	2.18	67.8	6.39	67.8	6.39
Ohio.....	81	69.7	5.4	64.3	2.4	65.4	2.3	67.3	2.6	67.4	3.2	68.6	2.9	62.1	2.18	67.8	6.39	67.8	6.39
Michigan.....	4	65.0	6.0	57.8	3.1	61.6	2.6	60.3	1.6	62.9	3.4	63.3	3.6	56.5	3.3	63.4	5.38	63.4	5.38
Indiana.....	4	71.5	5.7	63.1	0.7	67.7	1.6	66.2	3.1	63.5	3.3	61.6	3.6	56.5	3.3	63.4	5.38	63.4	5.38
Illinois.....	13	69.9	4.5	63.3	3.0	66.4	2.2	65.2	2.9	63.2	3.0	65.4	3.3	54.5	2.05	63.0	4.92	63.0	4.92
Wisconsin.....	3	63.0	4.6	58.4	3.5	61.8	3.8	60.6	4.1	58.0	3.0	60.4	2.9	50.7	3.47	67.8	6.66	67.8	6.66
Minnesota.....	3	60.4	4.7	49.9	3.0	57.8	3.0	55.4	3.6	55.4	3.6	56.7	3.4	50.1	1.87	68.3	4.42	68.3	4.42
Iowa.....	2	67.1	3.9	65.6	2.9	61.5	2.1	63.7	3.7	61.6	2.9	63.8	3.3	62.2	1.57	70.9	4.83	70.9	4.83
Missouri.....	2	73.1	4.7	70.0	2.5	71.3	2.5	66.1	4.4	69.3	3.4	69.3	3.4	62.2	2.79	70.9	4.83	70.9	4.83
Nebraska Territory.....	2	73.1	3.9	75.3	2.5	69.8	2.5	66.1	4.4	69.3	3.4	69.3	3.4	62.2	2.79	70.9	4.83	70.9	4.83
Kansas.....	2	73.1	3.9	75.3	2.5	69.8	2.5	66.1	4.4	69.3	3.4	69.3	3.4	62.2	2.79	70.9	4.83	70.9	4.83
California.....	4	71.1	0.0	70.6	0.0	68.7	0.0	68.8	0.0	68.2	0.0	68.2	0.0	73.3	1.27	72.3	1.31	72.3	1.31

## NOTES OF THE WEATHER—SEPTEMBER, 1865.

*Lee, Maine.*—September 19.—Frost this morning; killed cucumber and squash leaves. 27th, heavy frost this morning which killed potato tops, &c. 28th, slight frost.

*Cornish, Maine.*—September 27.—White frost this morning; the first seen here. No damage done, as the crops were too far matured.

*Standish, Maine.*—September 27.—Slight frost on the ground this morning; the first this fall, and the only one this month. The temperature during the first seventeen days of the month averaged 70°.81. It is drier here than last year; wells are failing now that did not fail last year; lakes and rivers are very low; mills are stopping.

*Lisbon, Maine.*—The first frost was on the 19th; frost also on the 27th, 28th, and 29th. The month has been very dry, but few wells affording any water. Streams and ponds are very low.

*West Waterville, Maine.*—September 20.—First frost observed; noticed only on low lands near the river; slight frost also on the 27th and 28th. The month has been very dry, but the springs are not so low as in the drought of last season.

*Gardiner, Maine.*—Only twice in twenty-nine years (in 1841 and 1846) has September been as warm as in this year. The amount of rain was less than in any September for twenty-seven years. The amount of rain in July, August, and September, this year, was 6.917 inches; the average of these three months for the last twenty-seven years has been 9.599 inches.

*Cornish, Maine.*—September 19.—Mount Washington covered with snow this morning. 27th, heavy frost this morning.

*Steuben, Maine.*—September 9.—Frost this morning. 15th, continues exceedingly dry; cornstalks cut green only yesterday; to-day the leaves can easily be ground as fine as snuff; fires are raging fearfully in all directions except seaward. 20th, frost this morning; the intervalles as white as snow. 23d, plenty of frost this morning.

*Sangerville, Maine.*—This town was visited by a hail-storm on the 21st September which inflicted much damage upon the crops. The hail-stones were from half an inch to an inch in diameter. The window glass throughout the village was badly broken, houses losing from thirty to a hundred panes each.—*Newspaper.*

*Claremont, N. H.*—Slight frost on the 27th, 28th, and 29th, the first of the season. The first effectual rain after July 20th was on the 18th of September, during which time the weather was almost continuously hot. Springs are unprecedentedly low.

*Stratford, N. H.*—September 19.—First frost of the season this morning. The month has been very dry; many small streams, wells, and springs have dried up.

*North Barnstead, N. H.*—September 27.—Light frost this morning; killed vines in low grounds.

*Claremont, N. H.*—The month has been exceedingly dry. Rivers and springs are very low.

*Brandon, Vermont.*—September 19.—First frost of the season; did no damage. 27th, white frost.

*Craftsbury, Vermont.*—The first frost was on the morning of the 19th, and the second on the 27th.

*Lunenburg, Vermont.*—September 19.—Slight frost; nothing injured. 27th, 28th, 29th, slight frost; killed vines and tender plants in valleys, but killed nothing on the hills. 28th, 29th, some raspberry and strawberry vines are cov-

ered with fruit of the second crop, in all stages from the blossom to the ripe fruit; also some blossom buds on an apple tree.

*Middlebury, Vermont.*—First frost was on the 19th. The month has been dry and warm.

*Mendon, Mass.*—September 30.—No frost except in some low places; wells very low, some dry.

*Topsfield, Mass.*—September 19.—Light frost in low grounds. 30th, drought extreme; brooks have ceased running that are not known to have ever been dry before. Innumerable fires in the woods and swamps are to be seen from every hill-top.

*New Bedford, Mass.*—The drought has been very great. Numerous wells have ceased to flow, and rain-water cisterns have become almost universally exhausted.

*Westfield, Mass.*—September has been the driest month of the year; there has been no September so dry since 1855. Many wells and springs are dry.

*Georgetown, Mass.*—The drought has been very severe. Water has not run in Penn brook, a stream leading from Baldpate pond, for three weeks; never failed but once before within the memory of the oldest, and then but for a day. Some families have to go a quarter of a mile for water for drinking purposes, and to ponds at considerable distances for farm stock. Fields and woods are exceedingly dry; the least spark is easily fanned to a flame, and this gives cause for frequent alarms of fires.

*Newbury, Mass.*—September 27.—A slight white frost.

*Columbia, Conn.*—Slight frost on the morning of the 26th and 27th.

*Middletown, Conn.*—September 27.—White frost on low grounds; the first for the season.

*Pomfret, Conn.*—Have no record of a September so warm or so dry as the present one.

*Rochester, N. Y.*—The temperature of the month has been much above the general average for twenty-nine years. The first half was the warmest first half of September in twenty-nine years. The drought was severe in this section in July and August, and ended in the first half of September. On the 27th there was frost, doing little injury.

*Skaneateles, N. Y.*—September 18 and 19.—An extraordinary ebb and flow of our lake (Skaneateles) that greatly affected the flour mill and other establishments requiring a steady flow of water. The ebb and flow was four or five inches. The same phenomenon occurred in 1825 and 1837. In the latter year the water suddenly rose four feet and swept in a volume over the dam. Frost occurred only once this September, on the 27th, and then perceptible only on fences in low land.

*South Trenton, N. Y.*—Frost on the 20th, 25th, 26th, and 28th.

*South Hartford, N. Y.*—September 27.—The ground was whitened by frost this morning, the first of the season, and sufficiently severe to destroy all tender vegetation. It is earlier than the first frost last year. 30th, the present drought has lasted since August 11. No rain was recorded in August after that date, and the rain during September, though amounting to a little over two inches, was insufficient to thoroughly moisten the soil or to raise the springs and streams, which are unusually low for this season.

*Palermo, N. Y.*—September 8.—The first rain since the 11th of August began to-day at noon. 27th, slight frost this morning, not enough to kill the tenderest vegetation.

*Palmyra, N. Y.*—September 27.—Hard frost last night.

*Depauville, N. Y.*—September 18 and 27.—Light white frost. 30th, the drought of August continued through the whole of September, and its effects are very distressing. Many wells have given out, pastures are very short, and



fall ploughing had to be put off. There was no frost to hurt vegetation; even geraniums and other tender plants out of doors have not suffered yet.

*Jamestown, N. Y.*—A severe rain commenced about 11 o'clock in the night of the 7th; during the forenoon of the 8th it increased in violence and caused a large amount of damage. Chautauqua lake was raised over three feet. About 2 o'clock in the morning of the 9th a severe shower occurred, raising the streams still higher. The roads through the country are very much damaged. Hardly a bridge remains. Dwellings were swept away and several persons drowned. Such a flood has never been known in this section.

*Theresa, N. Y.*—September 19.—First frost. 24th, hard frost.

*Cole's Landing, near Haddonfield, N. J.*—September 8.—A heavy rain fell after 9 p. m.; upwards of four inches were collected, the rain gauge having been filled, perhaps overflowed. The first half of the month was very warm and wet, with unusually heavy rains. The latter half was dry and very favorable for wheat-sowing, &c.

*Greenwich, N. J.*—September 8.—An inch and three-quarters of rain fell this morning in about two hours, from about 4.40 to 6.40 a. m. There were also showers during the day, amounting to two-tenths of an inch, and eight-tenths of an inch fell during the night, making two inches and three-quarters in twenty-four hours, the largest amount measured in one day during the eighteen months in which this record has been kept. There was no frost this month.

*Newark, N. J.*—During the last twenty-two years only one September, that of 1846, has had as high a mean temperature as the one just closed; but this was owing more to the uniformity of temperature of the past month than to any intense heat, such as has characterized the month in some previous years. The first half of the month, during which the heat was most manifest, was marked by a large amount of lowering weather, the dampness penetrating houses in an unusual degree, although the rains were not excessive, no more falling than the parched condition of the ground during the latter part of August rendered desirable. More than an inch and a half of rain fell during five hours on the 2d, and nearly an inch on the 8th, from 1.30 p. m. until after midnight. The total amount of rain was about the average for September. No frost was observed during the month.

*Moorestown, N. J.*—There was no frost in September.

*Blooming Grove, Pike Co., Pa.*—Light frost on the morning of the 19th and 20th, without any damage. 23d, plum trees in blossom again. 27th, ice formed in vessels standing out of doors.

*Connellsville, Pa.*—Rain every day from the 2d to the 9th inclusive. A very heavy rain fell from 10½ a. m. to 2½ p. m. of the 9th. The ground was completely covered with water, and within a boundary of six miles along the foot of the mountain all the streams overflowed their former bounds and swept away everything in their course. In places on the hill-sides, where there had been no stream, the water flowed like the mountain torrent. A cylindrical vessel, which stood during the rain in an open space, contained after the rain six and a quarter inches of water.

*Philadelphia, Pa.*—September 4.—From 3 p. m. to 4½ p. m. very heavy rain, thunder, and lightning. Between 3 and 4 very nearly two inches of rain fell, a greater quantity than before observed for the same length of time. The streets were completely flooded, in some places to the depth of eighteen inches. This heavy rain did not extend much beyond the thickly built portion of the city. More than two and a quarter inches of rain fell from 11 a. m. of the 8th to 4 p. m. of the 9th. This September was the warmest since the beginning of these observations in 1851.

*Fallsington, Pa.*—The month has been warmer than any September since this record began, (1849.) All the rains have been light, and springs and mill

streams are getting very low. There was no frost during the month, which is remarkable for this locality.

*Pennsville, Pa.*—September has passed without frost (in the least) to injure vegetation, without storms of wind, thunder, or great floods. From the 2d to the 14th inclusive it was wet, nearly all the rain of the month falling during that period; thence to the end of the month it was dry, except moderate rains on the 18th and 24th.

*Woodlawn, Maryland.*—September has been very dry, as was also August. When wheat should be planted not one-fourth of the ground intended for wheat has been ploughed, owing to its being so dry and hard. There was a light frost on the morning of the 20th in a few spots on dry grass and boards, not sufficient to injure vegetation.

*Toledo, Ohio.*—The amount of rain (over ten inches) and the high mean temperature for the month were unprecedented. In September, 1843, rain fell to the depth of nine and a quarter inches, and in 1855 eight inches. The mean temperature was nearly eight degrees above that of the mean for the last five years. In no year from 1826 has such weather been experienced in September.

*Austinburg, Ohio.*—September 19.—Slight frost on boards.

*Kelley's Island, Ohio.*—The month of September has been remarkable for a much higher mean temperature than the corresponding month for a long period, also for a greater amount of rain than for any month since the observer began to measure the rain-fall.

*Urbana, Ohio.*—The temperature of the month was unusually high, being eight degrees above the average for the previous thirteen years, and about two and a half degrees higher than any other September during the same period. It was also remarkable for being warmer than July and August. There was no frost during the month, and vegetation generally is as fresh and green as in May and June.

*Saybrook, Ohio.*—The mean temperature of September was higher than that of July or August.

*Welshfield, Ohio.*—There was no frost in September.

*Norwalk, Ohio.*—This September was the warmest since the observer has kept a record.

*Bethel, Ohio.*—September 30.—There has been no frost here yet.

*Homestead, Michigan.*—There was no frost in September, except a little on two mornings seen on some boards, but no injury done to the tenderest plants.

*Kalamazoo, Michigan.*—Slight frost on the morning of the 19th September; no damage done.

*Richmond, Indiana.*—The mean temperature of the month was nearly eight and a half above the average for the last thirteen years, and so warm a September has not been known for many years, if ever.

*Madison, Indiana.*—September was remarkable for the frequency of rain, especially during the first half, and for the almost uninterrupted heat, the great humidity of the atmosphere rather than the degree of heat rendering it very oppressive. There was no frost during the month. Farmers are late getting their wheat sown, it being too wet to prepare the ground.

*Winnebago, Illinois.*—The temperature of the month was more than nine and a half degrees above the mean of September for the previous seven years. There was no frost during the month.

*Sandwich, Illinois.*—There was no frost during the month, but it was nearly cold enough on the night of the 18th.

*Athens, Missouri.*—The first frost of the season was on the night of the 27th of September, just enough to perceive that the gourd-vines were nipped.

*Canton, Missouri.*—September 30.—No frost yet.

*Easton, Missouri.*—September 30.—First frost of the season this morning.

*St. Louis, Missouri.*—River unusually high for the season; lowest, September 11, eleven feet two and a quarter inches above low-water mark; highest, September 22 and 23, seventeen feet one inch and a quarter above low-water mark.

*Delavan, Wisconsin.*—The month of September is remarkable for entire absence of frost.

*Plymouth, Wisconsin.*—No frost as yet; the latest ever before observed in this part of the country without frost was September 27.

*Manikoe, Wisconsin.*—September has been the warmest month of the year.

*Weyauwega, Wisconsin.*—There was no frost in September hard enough to injure vegetation in the least; very slight frosts appeared on the mornings of the 18th and 19th. The leaves on the trees at the end of the month were nearly as green as in June.

*Rocky Run, Wisconsin.*—Very sultry and oppressive weather from the last week in August till the 29th of September, except the 18th, 19th, and 20th of September. No frost yet this season.

*Bloomfield, Wisconsin.*—September 29.—Apple trees in blossom and Persian lilac in flower. 30th, strawberries in blossom.

*Afton, Minnesota.*—Not a particle of frost this month.

*Lyons, Iowa.*—Two heavy rains are recorded in September, four inches and four-tenths on the 7th, and four inches on the 17th. Very slight frosts on the 29th and 30th.

*Independence, Iowa.*—Slight frost on the 30th, the first of the season.

*Iowa Falls, Iowa.*—September 30.—Very slight frost this morning, the first this season. Large flocks of wild geese going south.

*Manchester, Iowa.*—September 30.—Frost this morning, the first since spring, nipped tender squash leaves.

*Dubuque, Iowa.*—September 30.—Wild geese flying south.

*Muscatine, Iowa.*—September 30.—No frost yet this fall.

*Atchison, Kansas.*—September 30.—Light frost in the low grounds this morning. Wild geese observed going south this evening.

#### EARTHQUAKE.

*Silver Spring, Lancaster county, Pennsylvania.*—September 17.—At 3 p. m. a very slight tremor of the earth, accompanied by a rumbling sound like distant thunder or a heavy explosion, was observed by a number of persons in Lancaster city and county. No cloud was to be seen at the time. The Linnean Society has appointed a committee to collect all the facts with regard to it.

*Oxford, Chester county, Pennsylvania.*—September 17.—At 3 p. m. in this place, and several others in the neighborhood, a rumbling noise, as of a wagon driving over a bridge, coming from west to east, was heard by a number of persons. It was followed by a considerable shaking of the houses, in some instances rattling of the china in cupboards and trembling of the floor.





